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# CONTENTS OF VOLUME 36

## ARTICLES

Native American Population. A. L. KROEBER.....	1
Partilineal and Matrilineal Organization in Sumatra: The Minangkabau. E. M. LOEB.....	26
Culture Changes in Yucatan. ROBERT REDFIELD.....	57
Pueblo Sites of Southwestern Utah. J. E. SPENCER.....	70
North American Indian Traditions Suggesting a Knowledge of the Mammoth. W. D. STRONG.....	81
A Possible Culture Sequence at Mitla, Oaxaca. RALPH L. BEALS.....	89
The Bow-Drill in North America. PAUL S. MARTIN.....	94
Paviotso Shamanism. WILLARD Z. PARK.....	98
Crime and Punishment in Tlingit Society. KALERVO OBERG.....	145
Occupational Ritual, Belief, and Custom Among the Ovimbundu. WILFRID DYSON HAMBLBY.....	157
Kutchin Tribal Distribution and Synonymy. CORNELIUS OSGOOD.....	168
The Ceremony of the Sacred Bow of the Oglala Dakota. HELEN H. BLISH.....	180
The Maya Kinship System and Cross-Cousin Marriage. FRED EGGAN.....	188
The Hehe-Bena-Sangu Peoples of East Africa. W. BRYANT MUMFORD.....	203
A Note on Maya Cave Burials. MARY BUTLER.....	223
The Identification of the Mascoutens. TRUMAN MICHELSON.....	226
The Alleged Lack of Mental Diseases Among Primitive Groups. ELLEN WINSTON.....	234
Inca Masonry at Cuzco. MORRIS K. JESSUP.....	239
Culture Groups of the Tardenoisian in Central Europe. LOTHAR F. ZOTZ.....	242
Walter E. Roth. MELVILLE J. HERSKOVITS.....	266
Frederick Starr. FAY-COOPER COLE.....	271
Some Moot Problems in Social Organization. ROBERT H. LOWIE.....	321
Crime and Punishment Among the Barama River Carib of British Guiana. JOHN GILLIN.....	331
Glyph X of the Supplementary Series of the Maya Inscriptions. E. WYLLYS ANDREWS.....	345
Kinship and Social Behavior Among the Haida. GEORGE PETER MURDOCK.....	355
A Study of Indian Music in the Gulf States. FRANCES DENSMORE.....	386
Some Empirical Aspects of Northern Saulteaux Religion. A. I. HALLOWELL.....	389
Peruvian "Needleknitting." LILA M. O'NEALE.....	405
Utah Lake Skull Cap. GEORGE H. HANSEN.....	431
A Navaho Fire Dance. ALBERT B. REAGAN.....	434
Pigmentation, Sunlight, and Nutritional Disease. FREDERICK G. MURRAY.....	438
Notes on the Huichol. OTTO KLINEBERG.....	446

The Sacred Clowns of the Pueblo and Mayo-Yaqui Indians. ELSIE CURTIS PARSONS AND RALPH L. BEALS	491
Note on Easter Devils at Kawoik on the Papago Reservation. RUTH UNSWORTH	515
A Criticism of Wissler's North American Culture Areas. CARL R. A. WOODS	517
Chief Tings' Account of the Marriage Customs of the Chiefs of Yun- lunai of Kuqicho. JOHN K. SNEYDOK	524
Southern Paiute Bands. ISAAC I. KELLY	548
Holding Rites of the Bochneland Bakxatla. L. SCHAPIRA	561
Kent's Resilience. A Memorial. WILLIAM THAMBEIZER	585

## REPORTS

Proceedings of the American Anthropological Association for the Year Ending December 1933	272
Report of the Anthropological Society of Washington	285
American Ethnological Society	286
Archaeological Field Work in North America During 1933	595

## BOOK REVIEWS

GEORGE FRIEDER History, Psychology, and Culture ( <i>Loche</i> )	114
RAYNE The Method and Theory of Ethnology ( <i>Muratti</i> )	116
FRYMOOD Method in Sociology: A Critical Study ( <i>Wallis</i> )	118
MAURANDY Inupiat, a Medifacial Eskimo Settlement in Upernivik District, West Greenland ( <i>Collinge</i> )	118
MAURANDY Ancient Eskimo Settlements in the Kangamiut Area. ( <i>Collinge</i> )	118
FRIDMANN Red Mother ( <i>Loche</i> )	124
SCHWENK Aboriginal Society in Southern California ( <i>Steward</i> )	126
BOYERS New Types of Old Americans at Harvard ( <i>Shapiro</i> )	128
FRYMAN Agriculture of the American Indians: A Classified List of Annotated Historical References ( <i>Sauer</i> )	129
POWERMAKER Life in Lora: the Study of a Melanesian Society in New Ireland ( <i>Loche</i> )	129
KANE Life or Death in Luron ( <i>Loche</i> )	130
BOYER Caravans of the Old Sahara: an introduction to the history of the Western Sudan ( <i>Robinson</i> )	131
INCHEN CROOK The Bantu Tribes of South Africa: Reproductions of Photographic Studies ( <i>Gifford</i> )	131
ČEKOSLOVENSKÁ VLASTIVĚDA (Czechoslovakia in All Its Aspects), Vol. II, Člověk, Muž ( <i>Romel</i> )	132
WEISSER Primitive Secret Societies ( <i>Gifford</i> )	133
IMMERHOFF Kultur und Umwelt der Kleinwuchsigen in Arika. ( <i>Hildebrand</i> )	289
BERNARDINI Aethiopien des Westens. Forschungsreisen in Portu- galesisch Guinea ( <i>Hildebrand</i> )	290
SCHAPIRA AND FORRESTER The Early Cape Hottentots described in the writings of Olfert Dapper (1668), Willem ten Rhyne (1686), and Johannes Gulielmus de Grevenbroek (1695). ( <i>Gifford</i> )	291

BURROWS: The Native Music of the Tuamotos. ( <i>Roberts</i> )	291
DORRINGTON: Dictionnaire de la langue des Iles Marquises. Français-Marquisien. ( <i>Stimson</i> )	292
BASU: Juyāṅg itāi. ( <i>Bonnerjea</i> )	293
LOTHROP: Atitlan, An Archaeological Study of Ancient Remains on the Borders of Lake Atitlan, Guatemala. ( <i>Butler</i> )	294
RICARD: La "Conquete Spirituelle" du Mexique. ( <i>Reals</i> )	296
LEHMANN: Aus den Pyramidstadt en in Alt-Mexico. ( <i>Houch</i> )	297
MILWIN AND VAILLANT: The Ruins of Holmul, Guatemala. ( <i>Reys</i> )	297
WILLIAMS: Grammar, Notes and Vocabulary of the Makuchi Indians of Guiana. ( <i>Michelson</i> )	300
HOLMES: The Eugenic Predicament. ( <i>Fodd</i> )	300
VON EICKSTEDT: Rassenkunde und Rassengeschichte der Menschheit. ( <i>Uettking</i> )	302
COLE: The Long Road from Savagery to Civilization. ( <i>Spiro</i> )	302
JOHNSON: History, Ethnology and Anthropology of the Aleut. ( <i>Olson</i> )	461
BARRIE: Ancient Aztalan. ( <i>Setzler</i> )	461
NASH: The Excavation of the Ross Mound Group I. ( <i>Setzler</i> )	461
COOPER: The Red Cedar River Variant of the Wisconsin Hopewell Culture. ( <i>Setzler</i> )	461
Bulletin of the Society for Pennsylvania Archaeology, The Pennsylvania Archaeologist, Vols. 1-3. ( <i>Fenton</i> )	464
SPHR: Yuman Tribes of the Gila River. ( <i>Krober</i> )	465
COOK: Social Organisation and Ceremonial Institutions of the Boninana. ( <i>Herskovits</i> )	466
GADEN: Proverbes et Maximes Peuls et Foucouleurs, traduits, expliqués et annotés. ( <i>Herskovits</i> )	466
IRIT: Das alte Königreich Kongo. ( <i>Herskovits</i> )	466
SPANNARS: Züge aus der politischen Organisation afrikanischer Völker und Staaten. ( <i>Herskovits</i> )	466
SCHIBISTA: Bambuti: die Zwerge vom Kongo. ( <i>Loeb</i> )	469
EARTH: Valenge Women. An Ethnographic Study. ( <i>Houghly</i> )	470
LEENHARDT: Documents Néo-Calédoniens. ( <i>Perle</i> )	471
ZUCKERMAN: Functional Affinities of Man, Monkeys, and Apes. A study of the bearings of physiology and behavior on the taxonomy and phylogeny of lemurs, monkeys, apes, and man. ( <i>Miller</i> )	471
RÖMER: Man and the Vertebrates. ( <i>Camp</i> )	473
LOEFFLER: Tabellen zur Berechnung der Ohrhöhe des Kopfes. ( <i>Hooton</i> )	474
FURST: Zur Kenntnis der Anthropologie der Prähistorischen Bevölkerung der Insel Cypern. ( <i>Schapiro</i> )	474
MURDOCK: Our Primitive Contemporaries. ( <i>Reis</i> )	475
ROBERTS: Form in Primitive Music. An Analytical and Comparative Study of the Melodic Form of Some Ancient Southern California Indian Songs. ( <i>Horz</i> )	476
WESSEL: An Ethnic Survey of Woonsocket, Rhode Island. ( <i>Clements</i> )	478
GAULT: Criminology. ( <i>Clements</i> )	478

THOMPSON: Tales of the North American Indians. ( <i>Gayton</i> ) . . . . .	479
THOMPSON: Motif-Index of Folk-Literature. Vol. I:A-C; II:D-E. ( <i>Gayton</i> ) . . . . .	479
SCHMIDT: Der Ursprung der Gottesidee. Eine historisch-kritische und positive Studie. Band III: Die Religionen der Urvölker Asiens und Australiens. Band IV: Die Religionen der Urvölker Afrikas. ( <i>Cooper</i> ) . . . . .	599
SCHMIDT: Der Ursprung der Gottesidee. Band V: Nachträge zu den Religionen der Urvölker Amerikas, Asiens u. Australiens. ( <i>Wallis</i> ) . . . . .	600
WIRTH: Die heilige Urschrift der Menschheit. ( <i>Cooper</i> ) . . . . .	600
SCHEBESTA: Among Congo Pygmies. ( <i>Hambly</i> ) . . . . .	601
WESTERMANN: The African Today. ( <i>Herskovits</i> ) . . . . .	602
ORDE BROWNE: The African Labourer. ( <i>Herskovits</i> ) . . . . .	602
HANDY: Houses, Boats, and Fishing in the Society Islands. ( <i>Skinner</i> ) .	604
BACHMANN: Die Besiedlung des alten Neuseeland. Eine Anthropogeo- graphische Studie. ( <i>Skinner</i> ) . . . . .	605
LANDTMAN: Ethnographical Collection from the Kiwai District of British New Guinea in the National Museum of Finland, Hel- singfors. A Descriptive Survey of the Material Culture of the Ki- wai People. ( <i>Lewis</i> ) . . . . .	606
BOAS: Bella Bella Tales. ( <i>McIlwraith</i> ) . . . . .	606
SEGER: Early Days Among the Cheyenne and Arapahoe Indians. ( <i>Wissler</i> ) . . . . .	607
MARCH: Standards of Pottery Description. ( <i>Hawley</i> ) . . . . .	607
MEAD: The Changing Culture of an Indian Tribe. ( <i>Goldenweiser</i> ) . .	609
AMSDEN: Navaho Weaving: Its Technic and History. ( <i>O'Neale</i> ) . .	611
HAGUE: Latin American Music: Past and Present. ( <i>Herszog</i> ) . .	612
WEGNER: Indianer-Rassen und vergangene Kulturen. Betrachtungen zur Volksentwicklung auf einer Forschungsreise durch Süd- und Mittelamerika. ( <i>Oettinger</i> ) . . . . .	612
CLARK: Early Forerunners of Man. A Morphological Study of the Evolutionary Origin of the Primates. ( <i>Krogman</i> ) . . . . .	614
PEARL AND PEARL: The Ancestry of the Long-Lived. ( <i>Danforth</i> ) . .	615

## SOME NEW PUBLICATIONS

General list, 135. North America, 304. Central and South America, 305. Oceania, 305. Africa, 306. Asia and Europe, 306. Physical Anthropology, 307. General and Miscellaneous, 308. North America, 481. Mexico, Central and South America, 482. Oceania and Asia, 482. Africa, 484. Prehistory and Physical Anthropology, 484. General and Miscellaneous, 485. North America, 619. Mexico, Central and South America, 620. Africa, 621. Oceania, 621. Asia and Europe, 622. Prehistory and Physical Anthropology, 623. Miscellaneous, 624.

## DISCUSSION AND CORRESPONDENCE

Some Arapaho Kinship Terms and Social Usages (Michelson), 137. New Rules for Historical Instruction in Germany, 139. An Isolated Media-

val Moslem Colony in China (Robinson), 141. The Azanian Culture (Robinson), 141. Seminar in the Caribbean (Herring), 142. Eskimo Archaeology and Somatology (Collins), 309. The Galla of East Africa (Robinson), 313. Transportation by Migratory Animals (Mason), 314. The Method and Theory of Ethnology: An Answer to R. R. Marett's Review (Radin), 315. Oüenebigonchelinis Confounded with Winnebago (Michelson), 486. The Aztec Calendar Stone (Caso), 487. On "Expression" in Indian Singing (Densmore), 487. Masks in the Southwest (White), 626. Maiden Sacrifice Among the Ojibwa (Michelson), 628. Note on Kickapoo Ethnology (Michelson), 629. Some Orthographic Recommendations (Herzog and others), 629. De Hevesy on Munda and Finno-Ugrian Linguistics, and on the Easter Island Script (Michelson), 632. The New Atlatl, Found in Italy, a Falsification (Beyer), 632.

NOTES AND NEWS

First International Congress of Anthropological and Ethnological Sciences, 143. Martin Gusinde, 143. Ella Deloria at Meeting of New York Academy of Sciences, 143. Meeting of Anthropologische Gesellschaft in Wien, 143. Field Fellowships, Laboratory of Anthropology, 143. Robert H. Lowie as Editor, *AMERICAN ANTHROPOLOGIST*, Vol. 36, No. 1, 317. Handbook of South American Indians, 317. A New Peruvian Site, 317. Two New Institutional Series, 317. Activities of the University of Adelaide in 1933, 317. Field Work of the Peabody Museum, Harvard University, in 1933, 318. Death of Felix Neumann, 318. Death of Knud Rasmussen, 319. Death of Davidson Black, 319. Grants of the Social Science Research Council, 489. A Note on Poncho Ruin, Utah (Hargrave), 490. Henry Wassen and Choco Indians, 490. Christopher Wren's "A Study of North Appalachian Indian Pottery," 490. Death of Hugh Lenox Scott, 490. Anthropological Researches in the Italian Sahara (Cipriani), 634. Grants and Fellowships of the American Council of Learned Societies, 635. First Tree Ring Conference (Colton), 635. First International Congress of Anthropological and Ethnological Sciences (Blom), 636. Death of Berthold Laufer, 637. Erratum, 637.

INDEX..... 639

# ABBREVIATIONS OF NAMES OF JOURNALS IN FOOTNOTES

A	Anthropos
l'A	L'Anthropologie
AA	American Anthropologist
AAA-M	American Anthropological Association, Memoirs
ArA	Archiv für Anthropologie
AES-P	American Ethnological Society, Publications
AGW-M	Anthropologische Gesellschaft in Wien, Mitteilungen
AJPA	American Journal of Physical Anthropology
AMNH-AP	American Museum of Natural History, Anthropological Papers
-B	American Museum of Natural History, Bulletin
-M	American Museum of Natural History, Memoirs
-MA	American Museum of Natural History, Memoirs, Anthropological Series
-MJ	American Museum of Natural History, Memoirs, Jesup Expedition
BAE-B	Bureau of American Ethnology, Bulletins
-R	Bureau of American Ethnology, (Annual) Reports
CNAE	Contributions to North American Ethnology
CU-CA	Columbia University, Contributions to Anthropology
FL	Folk-Lore
FMNH-M	Field-Museum of Natural History, Memoirs
-PAS	Field Museum of Natural History, Publications, Anthropological Series
IAE	Internationales Archiv für Ethnographie
ICA	International Congress of Americanists (Comptes Rendus, Proceedings)
IJAL	International Journal of American Linguistics
JAFL	Journal of American Folk-Lore
JRAI	Journal of the Royal Anthropological Institute
MAIHF-C	Museum of the American Indian, Heye Foundation, Contributions
-IN	Museum of the American Indian, Heye Foundation, Indian Notes
-INM	Museum of the American Indian, Heye Foundation, Indian Notes and Monographs
PM-M	Peabody Museum (of Harvard University), Memoirs
-P	Peabody Museum (of Harvard University), Papers
-R	Peabody Museum (of Harvard University), Reports
PMM-B	Public Museum (of the City) of Milwaukee, Bulletin
SAP-J	Société des Américanistes de Paris, Journal
SI-AR	Smithsonian Institution, Annual Reports
-CK	Smithsonian Institution, Contributions to Knowledge
-MC	Smithsonian Institution, Miscellaneous Collections
UC-PAAE	University of California, Publications in American Archaeology and Ethnology
UPM-AP	University of Pennsylvania (University) Museum, Anthropological Publications
USNM-R	United States National Museum, Reports
-P	United States National Museum, Proceedings
UW-PA	University of Washington, Publications in Anthropology
ZE	Zeitschrift für Ethnologie

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## NATIVE AMERICAN POPULATION

By A. L. KROEBER

THE following pages are an abstract of conclusions reached as to aboriginal American population in a study undertaken as part of a monograph dealing with cultural and natural areas in native North America. This memoir, like so many others, is being delayed in its publication by economic causes universally familiar. It contains a map of tribal territories and a grouping of these into some eighty cultural aggregations, which form the basis of all computations on population density. In the present paper only the summary results can be given, together with some discussion of their meaning.

A posthumous work by James Mooney<sup>1</sup> makes available the first careful and complete tribe-by-tribe series of estimates of the native population of America, north of present-day Mexico, for the period of early contact of each group with settling Caucasians. This invaluable study renders possible the examination of population density in terms of cultural or other areas.

The Mooney figures are here used with one consistent modification—a substitution of my total of 133,000 for California<sup>2</sup> in place of C. H. Merriam's<sup>3</sup> 260,000 which Mooney took over; hence with a reduction of the total for the continent north of Mexico from 1,152,950 to 1,025,950, or about 10 percent. I have made this substitution because my total is arrived at through a tribe-by-tribe addition or "dead-reckoning" method, like all Mooney's other figures; whereas Merriam uses a mission to non-mission area multiplication ratio for the state as a whole.<sup>4</sup>

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<sup>1</sup> The Aboriginal Population of America North of Mexico, SI-MC 80, no. 7 (Publ. 2955), 1928; edited by J. R. Swanton. This is a brief version of a contemplated large monograph, for which Mooney had studies under way before 1908, but of which by his death in 1921 he had completed only the section dealing with the Indians of the states from Maine to Pennsylvania. The brief article Population in the Handbook of American Indians contains only totals by countries.

<sup>2</sup> BAE-B 78 880-891, 1925.

<sup>4</sup> The Indian Population of California, AA 7: 594-606, 1905.



It proved necessary to convert Mooney's data for tribes and bands into terms of the ethnic groups recognized in my own tribal territorial map. This involved some consolidations. In other cases, Mooney gives only combined figures for tribes which I keep separate; thus, Southern Paiute and Paviotso. Accordingly there are overlaps as well as omissions; and an exactly authentic check-up on the conversions from his scheme is difficult. The result is that my rearranged totals fall about 10,000 below his. This discrepancy of 1 percent is negligible since the best of Mooney's estimates can hardly pretend to be nearer than 10 percent to the probable truth, and some may be 50 percent or more from it. It is of still less moment so far as it enters into population densities, because the boundaries of many tribal territories are imperfectly known or in dispute.

The areas in the lists that follow were calculated by planimeter on my tribal map. The figures given below for both areas and population are summations of those for individual tribes. All densities are computed to 100 km<sup>2</sup>, which are 38.51 sq.m., or about 7 percent more than a standard U. S. township of 6 by 6 miles.

Mooney's figures are probably mostly too high rather than too low, so far as they are in error. This is the opinion of Swanton, his posthumous editor. Mooney himself was apparently reducing estimates as his work progressed. Swanton mentions an earlier figure of 32,700 for New England as compared with the final one of 25,100. For part of the Southeast, Swanton's independent computation is 44,385, Mooney's 62,400.<sup>5</sup> Mooney allows 33,800 Pueblos, Kidder 20,000.<sup>6</sup>

All in all, however, Mooney's estimates and computations have clearly been made on the basis of wide reading, conscientiousness, and experienced judgment. Until some new, equally systematic, and detailed survey is made, it seems best to accept his figures *in toto*<sup>7</sup> rather than to patch them here and there. My impression is that Mooney's total of about 1,150,000, reduced to 1,025,000 by the California substitution, will ultimately shrink to around 900,000, but that the respective density ratios of the principal areas will not be very materially affected by such change.

The groups into which the tribal data have been consolidated are

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<sup>5</sup> Mooney apparently had not himself worked at the data for California, and therefore took over Merriam's result in block, with the result that this is his one area without figures for separate tribes or groups. My computation of 133,000 appeared after his work was done.

<sup>6</sup> P., 9

<sup>7</sup> Southwestern Archaeology, 39, 1924. "About 20,000" in some 70 towns at the time of the Spanish conquest

<sup>8</sup> Always excepting California, where he does not deal with separate tribes or groups.

TABLE 1  
POPULATION DENSITIES OF PRINCIPAL AREAS OF CULTURE

	Culture areas	Popula- tion	Terri- tory 100 km <sup>2</sup>	Den- sity
	<i>Arctic Coast</i>			
1	Eastern Eskimo (W. to incl. Coronation Gulf)	30,900	15,057	2.05
2	Western Eskimo (Mackenzie delta and west)	58,800	7,231	8.13
	<i>Northwest Coast</i>			
1	Northern Maritime (Tlingit, Haida, Tsimshian, Haisla) . . . . .	28,100	1,666	16.8
2	Central Maritime (all other Wakashans, Bella Coola) . . . . .	17,300	594	29.1
3	Gulf of Georgia (Salish) . . . . .	23,700	725	32.6
4	Puget Sound . . . . .	6,000	357	16.8
5	Lower Columbia . . . . .	32,300	507	63.7
6	Willamette Valley . . . . .	3,000	334	8.98
7	Lower Klamath (and SW Oregon) . . . . .	18,000	377	49.8
	<i>Intermediate and Intermountain</i>			
1	Great Basin (incl. Snake r. Shoshoneans)	26,700	10,810	2.47
2	California (excl. NW and S California)	84,000	1,941	43.3
3	Columbia-Fraser (incl. Interior Salish, Sahaptin, etc.) . . . . .	47,650	6,600	7.15
	<i>Southwest</i>			
1	Pueblo . . . . .	33,800	446	75.7
2	Circum-Pueblo (Apache and Navaho)	14,500	6,430	2.26
4	Sonoran area (Pima and Papago in U. S.)	10,600	864	12.2
7	NW Arizona (Havasupai, Walapai, Yavapai)	1,600	666	2.4
8	Lower Colorado (River Yumans, Cocopa to Mohave) . . . . .	13,000	416	31.25
9	Peninsular California in U. S. (Diegueño) . . . . .	3,000	166	18.1
10	Southern California (Shoshoneans, Chumash)	26,500	683	38.7
	<i>Eastern and Northern</i>			
1	Southeast proper . . . . .	87,800	5,983	14.7
2	South Florida . . . . .	4,000	542	7.38
3	South Texas (coastal) . . . . .	6,400	2,057	3.11
4	Red River (Caddoan group) and Pawnee.	25,900	4,563	5.67
5	Plains (high plains, short grass) . . . . .	50,500	13,978	3.61
6	Prairies (tall grass: C. Siouans, Dakota exc. Teton, etc.) . . . . .	53,000	11,692	4.53

TABLE 1 (*Cont.*)  
POPULATION DENSITIES OF PRINCIPAL AREAS OF CULTURE

	Culture areas	Popula- tion	Terri- tory 100 km <sup>2</sup>	Den- sity
7	Wisconsin (wild rice area) . . . . .	18,300	1,461	12.52
8	Ohio Valley (incl. Illinois) . . . . .	20,000	7,707	2.59
9	Southern Great Lakes (Iroquoian tribes)	42,500	4,421	9.61
10	North Atlantic Slope (Micmac, Abnaki) . . . . .	7,300	3,285	2.22
11	Middle Atlantic Slope (Penacook to Conoy)	46,800	1,828	25.6
12	South Atlantic Slope (excl. Yuchi, Creek)	41,900	2,467	17 —
13	Appalachian Summit (Cherokee) . . . . .	22,000	1,344	16.3
14	N. Great Lakes (Ottawa, Algonkin, most Ojibwa)	37,300	5,188	7.18
15	E. Sub-Arctic (Algonkins: Montagnais, Cree, Naskapi) . . . . .	23,000	25,677	1.11
16	W. Sub-Arctic (Athabascans: Chipewyan to Kutchin and Khotana) . . . . .	33,930	38,944	.87

TABLE 2  
POPULATION DENSITIES BY MAJOR AREAS

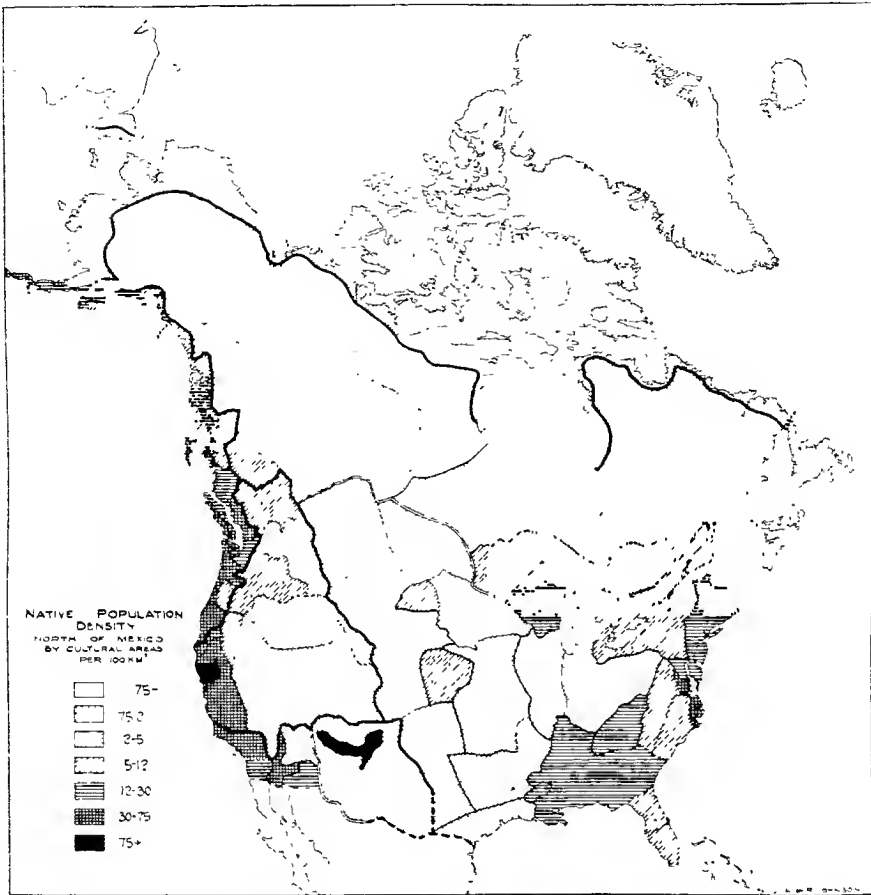
California	84,000	1,941	43.3
Northwest Coast	129,200	4,560	28.3
Southwest (part within U. S.)	103,000	9,671	10.7
(Intermediate-Intermountain.)	158,350	19,411	8.1
Columbia-Fraser	47,650	6,660	7.15
Eastern	426,400	61,328	6.95
Arctic Coast	89,700	22,288	4.02
(Eastern and Northern.)	520,630	131,137	3.97
Great Basin	26,700	10,810	2.47
Northern	94,230	69,809	1.35
Total. N. of Mexico <sup>a</sup> . . . . .	1,000,880	187,067	5.35

cultural ones, analogous to the "culture areas" currently recognized in American ethnology, but differing somewhat from the customary ones.

Condensing farther, into grand areas, we have the following. The areas are here arranged not geographically but in order of density.

<sup>a</sup> Coahuiltec in the United States are omitted, Apache and Papago in Mexico included.

I list the three main sub-units of the Intermediate-Intermountain area, because these are so diverse that the density of the whole area (shown in parentheses) is only a statistical mean. For the same reason I have given the Eastern and Northern areas separately, though adding in parentheses their joint mean.



Native population density north of Mexico

The outstanding fact is the exceptional density on the Pacific coast—both Northwest and California. Next comes the Southwest; but this also extends to the Pacific coast. Even the Columbia-Fraser region, a Pacific coast hinterland, more than holds its own against the fertile East. The Arctic coast, surprisingly enough, has a density more than half as great

as that of the East, though this was mostly agricultural, and one approximately equal—on the face of the figures even slightly superior—to the agricultural Eastern and non-agricultural Northern areas combined. This means of course that the latter had much the lowest density of all. The average figure for the continent (north of Mexico) falls somewhat below that for the agricultural East and somewhere above that for the Eskimo.

#### COAST LAND AND FARM LAND

Two generalizations are obvious: coastal residence did make for heavier population; agriculture per se did not necessarily increase density. The following summary will make these propositions more vivid.

We can first set off the wholly non-agricultural Pacific coast; next, the essentially agricultural areas of the Southwest and East; and then treat the remainder of the continent north of Mexico as a unit.

The Pacific coast may be conveniently taken as extending from the Malemiut Eskimo of Alaska to the Diegueño and Kamia just short of the mouth of the Colorado. The area is that of Pacific coast in the literal sense, not Pacific drainage. The whole Yukon, Fraser, and Columbia river areas are excluded, except for the Eskimo, Coast Salish, and Chinook at the mouths of these streams. California is included as a native culture area, not as a modern political unit; so is the northwestern margin of the Southwest, namely southern California.

The agricultural region comprises the tribes in whose economy farming plays a significant rather than sporadic part. Excluded are the Walapai,

TABLE 3  
GRAND POPULATION DIVISIONS NORTH OF MEXICO

	Population	Area 100 km <sup>2</sup>	Density	Percent of total popula- tion
Pacific coast, Bering strait to mouth of Colorado . . .	295,700	11,745	25.2	29.6
Essentially agricultural areas, E and SW . . .	404,600	39,884	10.1	40.4
Remainder . . .	300,580	135,438	2.1	30.0
	1,000,880	187,067	5.1	100.0

Havasupai, Yavapai, Apache, Navaho, Ojibwa, Abnaki, and the tribes of south Texas and south Florida.

In round numbers, the Pacific coast had 300,000 inhabitants out of a million north of Mexico, or 30 percent of the population in 6 percent of the area, with a density of 25 per 100 km<sup>2</sup>; the farming regions, 40 percent in 20 percent of the territory with a density of 10; the remainder, 30 percent on nearly 75 percent of the land, with a density barely exceeding 2.

That among non-farming natives a coast or coast-plain habitat was normally far more favorable than interior residence in conducting to an aggregation of population, is not only indicated by the much greater density in the Pacific areas, but by two other facts: first, that the Arctic shore Eskimo are, per area, more numerous than their inland Athabaskan and Algonkin neighbors; and second, certain density figures for adjacent Atlantic and Gulf tribal areas. Such are: Massachusetts, coastal, 105, Nipmuc, interior, 14; Montauk 158, Iroquois 7. Powhatan 38, Monacan 9; Chitimacha 32, Natchez 19.

A sharp line of division between coast and interior cannot easily be drawn in the Eastern region, because tidewater in many places runs far inland and because tribal adhesions and territories are so often uncertain. But a review of the itemized tribal data leaves little doubt that on the whole the population density in the farming parts of the Atlantic and Gulf region was perhaps twice as heavy on the coast, including habitats on tide-water or within a day's travel of salt water, as immediately inland thereof.

This means that for the continent as a whole (always unfortunately excluding Mexico), coastal residence, inclusive of that on coastal plains or along the lowest courses of rivers, led to a populational density from five to ten times greater than in the interior as a whole, in non-agricultural regions; and probably at least twice as great even in agricultural areas.

This finding may be expectable; but that the non-farming Pacific coast should overtop the farming areas with a two-and-a-half times greater density, is certainly surprising. It means, obviously, that the relation to the land in terms of agricultural utilization by the United States Indian was fundamentally different from our own. He was not a farmer in our sense of the word. Not only did he derive possibly half his subsistence through non-farming; but he utilized for his farming no more than a very small percentage of the land capable of being farmed.

This is particularly true of the East, and the Southwest should be accepted in this connection. The agricultural total in table 3 breaks up thus: East 347,200 souls 3,799,762 km<sup>2</sup>. 9.1 density;<sup>3</sup> Southwest, 57,400, 172,200,

<sup>3</sup> Spinden (cited below) computes, also from Mooney, 348,700 inhabitants in about 1,375,000 m<sup>2</sup>; which comes to 3,561,000 km<sup>2</sup> and a density of about 9.8

33.3. Not only is the gross density nearly four times as great in the Southwest, but the larger part of the territory assigned on the map to the Southwestern agricultural tribes is desert or mountain and unfarmable, or actually unfarmed by ourselves. The native Southwesterners, so far as they farmed, therefore pushed the exploitation of the land to a much higher pitch than the Easterners. This fact implies a different history, and thus further justifies the current sharp segregation of the Southwestern and Eastern native cultures. These essentially different histories, in turn, reinforced by the non-agricultural geographic gap between the areas, indicate separate origins, or at any rate separate branchings from the same southern stem of maize culture.

#### THE AGRICULTURAL EAST

The basic situation as regards native farming in the Eastern area may be made clearer by a comparison with our agriculture. The average yield of maize per acre today throughout the United States is between 25 and 30 bushels of 56 pounds of shelled corn. Maize notoriously increases its yield per acre but little under improved methods of farming. The improvements which we have made over Indian methods have been mainly in the direction of reducing production costs, especially in labor. The Indian therefore may be assumed to have derived nearly as many bushels from each acre of planting as we. He probably planted somewhat farther apart; but not unduly so, because of the difficulty of clearing and cultivating unnecessary area with his tools. A yield of 15 to 20 bushels therefore seems a fair estimate. This is 840 to 1120 pounds, say 1000, or a little under 3 pounds per day. This should more than sustain the average person in a community composed of men, women, and children. Beans and pumpkins would vary the diet as partial substitutes for maize without seriously affecting the acreage cultivated. The quantity of farm food consumed was probably less than here computed, because of the supplement of game, fish, mollusks, berries, wild seeds, and roots, which over much of the Eastern region is estimated to have contributed half of the food supply.<sup>10</sup> However, let us keep to our figure of nearly three pounds of maize or equivalent in farm products per head. Since this involves only about one acre cultivated per person, and we reckon 347,200 population in the Eastern agricultural area, the total native plantations in this region aggregated in round

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<sup>10</sup> The heavier density in the Wisconsin Wild Rice area as compared with adjacent areas suggests the influence, in a farming area, which even a single wild food plant might have if systematically gatherable.

numbers only a third of a million acres. Against this, we today plant a hundred million acres of maize alone in the United States—not all, but nearly all, within the native agricultural areas here called Eastern. We add another two hundred million acres in wheat, oats, cotton, and hay—many of these acres perfectly suitable, though not profitable to us, for maize. True, part of our total lies outside the region of systematic Indian farming; but it is a minority part. It does not much matter whether our total is one or two or three hundred million acres and the Indian total one-third or two-thirds of a million: the conclusion remains that the eastern Indian cultivated less than one percent of the area on which he could successfully have grown crops satisfactory to his needs and standards. My own opinion is that the figure was under rather than over one-half of one percent.

Here is another way of conceptualizing the situation. The Eastern agricultural density was 9.1 per 100 km<sup>2</sup>, a little under 9 souls—say 2 families—per township. We allot 144 quarter-sections to 144 families or some 700 persons in a township; and these earn through their crops not only their food but their clothing, tools, vehicles, furniture, taxes, and luxuries—and often support a town in addition. The ratio comes out about the same.

It is clear that two things were fundamentally different in the Eastern Indian and our economics: the land use, or relation to the land; and the place of agriculture in life. "Improvement" of land was confined to minute specks in the landscape. They were comparable in size to oases, although not in the least enforced by nature, being in fact simply selected by convenience or habit from among a hundred times as many sites about equally well utilizable. In other words, there was a hundredfold surplus of good land over farming population.

Second, while every native household in the area farmed, it becomes doubtful whether many of them did so from real necessity. If the Pacific coast from Bering strait to the Imperial valley desert could support 25 souls per areal unit without farming, it is not unreasonable to suppose that the uniformly fertile East might have supported 10 without farming. Agriculture then was not basic to life in the East; it was an auxiliary, in a sense a luxury. It made possible increased accumulation of food against the future, a living in permanent sites and in larger groups, and therefore joint undertakings, whether of council, ritual, war, or building. It thus no doubt contributed somewhat toward the enrichment of cultural life; but there is nothing to show that the culture in its fundamental forms was really resting on agriculture.

Does this mean that agriculture was a recent introduction in the East,



not yet fully acculturated and its potentialities still mainly unconceived? Theoretically such might well be the case, but it is not a necessary inference. As long as any other factors kept an originally light population light, the relation to the land, the part-only farm-use of this, might go on indefinitely. The answer to the question of the age of Eastern agriculture should not be given deductively. The direct evidence to be considered is archaeological: the indirect, social factors bearing on population.

As regards archaeology, we are still handicapped by our almost disgraceful inability to interpret eastern prehistoric data in sequential terms. Still, the gross fact remains that the Ohio and middle Mississippi valleys were found occupied by an exceedingly thin and scattered population, but full of thousands of mounds and other structures which probably required a somewhat more concentrated population to erect. Allowing for all possible shifting about of this earlier farming population, and an abnormal readiness to leave one site as soon as its structures were completed in order to begin over again elsewhere, a minimum of several centuries must nevertheless be allowed as the duration of the mound building, and to all major intents, this period was not only over but forgotten when the first whites entered. Since the mound culture was agricultural, it is accordingly hard to see how less than 500 years could have elapsed between the introduction of maize and the coming of Caucasians into the East. If agriculture in itself tended automatically to produce a marked increase of population density, it was long enough in the land to have achieved this effect to a much greater degree than was the case at discovery. Rather we see a positive thinning out of numbers, in at least part of the area. The indicated cause then is not mere shortness of duration of agriculture, but "social" factors of some sort.

Of such social factors, the most direct may be considered to have been warlike habits. Reference is not to systematic, decisive war leading to occasional great destructions but also to conquest, settlement, and periods of consolidation and prosperity. Of all this the Eastern tribes knew nothing. They waged war not for any ulterior or permanent fruits, but for victory; and its conduct and shaping were motivated, when not by revenge, principally by individual desire for personal status within one's society. It was warfare that was insane, unending, continuously attritional, from our point of view: and yet it was so integrated into the whole fabric of Eastern culture, so dominantly emphasized within it, that escape from it was well-nigh impossible. Continuance in the system became self-preservatory. The group that tried to shift its values from war to peace, was almost certainly doomed to early extinction. This warfare, with its attendant unsettlement,

confusion, destruction, and famines, was probably the most potent cause of population remaining low in the East. It kept agriculture in the rôle of being a contributor to subsistence instead of its basis. On the other hand, such farming as was practiced yielded enough added leisure, concentration, and stability to make pretty continuous warfare possible. A population of pure hunter-gatherers would probably, except on the immediate coast, have been too scattered in minute bands, too unsettled in a country of rather evenly distributed food possibilities, too occupied with mere subsistence, to have engaged in war very persistently. Just such seems actually to have been the case among Montagnais, Cree, and Ojibwa, for instance, as compared with Muskogians, Iroquoians, and Siouans. The latter were caught in a vicious circle, which at the same time gave them a stable adjustment. Agriculture made their wars possible; but their warfare kept the population down to a point where more agriculture was not needed.

Back of all this must lie another, though negative, factor: the absence of all effective political organization, of the idea of the state. Effective of course means effective from our point of view, or a wide historical one; it is not denied that the native organization was effective as regards its needs within the cultural system in which it found itself. Had controlling authority, in the form of a ruler, or of a cohesive, smoothly self-perpetuating group, ever developed in the East, war objectives other than revenge or personal status might also have developed: conquest, pacification, tribute, economic accumulations, further exploitation. From among many such beginnings, no matter how humble in scope, there could sooner or later have emerged, through mutual eliminations, larger units, and from these, true states, stable, internally peaceful, capable of producing wealth, growing in population, and thereby increasingly productive and profitable. Just as something of this sort happened in China and Egypt, it happened in Mexico and Peru: but it did not happen in any consequential degree in what is now United States. The political systems of the Iroquois, Creek, Cherokee, Natchez either grew up mainly in historic times under Caucasian influence and pressure, or look like possible fragmentary remnants from the Mound-builder days of heavier population and quasi-states. If there were such days, and it seems there were, it may well have been the introduction of agriculture that made their state system possible. But once the system crumbled, perhaps because of being a foreign import and not deeply enough rooted in the culture of the region, there would be a relapse to interminable, economically vain fighting, rendered, however, more persistent and wasteful than ever by the fact that agriculture gave an added margin allowing greater wastage. In the North, where farming could not be or was

not introduced, the limitation of purely natural food sources was perhaps the main factor imposing an upper limit to the human population. In the East, where the combination of fertility and agriculture made possible the comfortable subsistence by native techniques of a population a hundred-fold greater, the causes must have been cultural; and of these the outstanding ones were the paired ones of high social premium on war for its own sake and the absence of value for political organization of more than a rudimentary kind.

Incidentally, the cultural dependence of the Plains on the East, historically, is again indicated by the fact that the whole socio-political system and motivation of the Plains are at large a replica of those of the East. The acquisition of the horse gave the Plains tribes, while the buffalo lasted, a food-margin and a leisure parallel to the agriculture of the East, and which enabled them to duplicate the customs of the East with only minor modifications such as the replacement of torture by coup-counting.

We must then think of the East as agricultural indeed, but as inhabited by agricultural hunters, not by farmers. There were no economic classes, no peasantry to exploit nor rulers to profit from a peasantry. Every man, or his wife, grew food for his household. The population remaining stationary, excess planting was not practiced, nor would it have led to anything in the way of economic or social benefit nor of increase of numbers. Ninety-nine or more percent of what might have been developed remained virgin, and was tolerated, or appreciated, as hunting ground, as waste intervening to the nearest enemy, or merely as something natural and inevitable. There was nothing to prevent a clan, town, or tribe from shifting its houses and fields to any one of a hundred about equally satisfactory other sites in its acknowledged territory, or if strong enough, to several hundred in land of its neighbors. There was as a rule nothing much gained or lost, other than for immediate considerations, by such shifts, and they were freely made—not perhaps mainly from sheer restlessness, but at least for trivial reasons. The consequence is the strange contrast of a relatively unstable, mobile agricultural population in the East and a rather highly sessile non-agricultural one on the Pacific coast.

#### COMPARISON WITH MEXICO

A comparison with Mexico seems worth while. There, conditions were different. It is known that population was denser, and that social classification and political organization much more developed. However, there are only fragmentary or general gross estimates of the ancient Mexican population, and those varying. We may therefore attempt to proceed by

working backward from present conditions. The area of modern Mexico is roughly three-quarters of a million square miles or about 480 million acres, of which a fourth, or 120 million, are considered or are nominally cultivable, and 30 million are actually cultivated, although for only about half of these 30 million is a crop specified, so that the other half may be considered as in a condition of latent cultivation or devoted to products like maguey or henequen. The largest area is in maize, 7.5 million acres in 1926. Next come beans with 2.2, wheat 1.2, cotton 0.6. The total is astonishingly small compared with the United States, whose maize acreage alone is more than three times as large as Mexico's total acreage in all crops. There is nothing to show that any considerable areas now unused were planted at the time of discovery. Rather should the hacienda system and modern engineering have tended to add acreage. If we assume, as before, that an acre will support a person, the present total in maize and beans, if utilized to the limit, would have provided sustenance for 10 million souls. The addition of other acreage now actively in crops would bring this up around 15 millions, or the present population.

This is probably considerably too high for the past. It would mean that the country at the time of discovery was settled up to the very limit of the population which it would support with the agricultural techniques at its command. Of this there is no indication. I would prefer to reduce the figure by three-fourths or more. Yet even this means that a fourth or a fifth of the most available farm land, perhaps the majority of the best, was being worked. About the larger centers of population, as in the Valley of Mexico, there was probably little waste except of distinctly inferior tracts. The native historical records show that in Mexico Valley farm land was at a premium, and either in the form of tribute in produce or by direct appropriation was a prize of conquest. There existed here, then, a condition resembling that of modern civilized countries; and even in the less densely settled areas of central and southern Mexico, one approximating this. That the land was owned by towns or barrios or family aggregations instead of individually, is socially and juridically important, but does not affect the population and subsistence picture. Where the Eastern Indian farmed a fraction of one percent of his available land, the Mexican farmed a considerable fraction of his total,<sup>11</sup> and in congested, politically dominant, and affluent areas, practically all of it. It was almost inevitable therefore that

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<sup>11</sup> The reference is to the areas recognized as culturally Mexican, not to the modern republic of Mexico, the northern half of which was much more thinly populated and in considerable proportion non-agricultural.

in Mexico there should be economic classes, political organization, large communal works, and war for profit. There were in Mexico the equivalents of peasants and aristocracy. Without such classes, the population could hardly have accumulated as it did; and on the other hand, its growth must have tended to make organization desirable if not necessary. However free in principle, the average Mexican citizen of 1500 A.D. was no longer free as a Creek or Iroquois or Illinois was free. He could not farm if and where he pleased. He was bound by economic necessities of subsistence as well as by his state and rulers. The Spaniards probably found more essential peons in Mexico than they made.

#### THE SOUTHWEST

The Southwest was different from both Mexico and the East. It had maize as far back as Basket Maker times—less long than Mexico, no doubt, but longer than the East, where though agriculture was evidently at least some centuries old, there is nothing to show that its import goes back to the pre-Christian era. Population density in the Southwest, also, was intermediate, so far as genuinely agricultural peoples are concerned. The distinctive feature of the Southwest is the presence in it, side by side, of two kinds of population—the fairly densely settled farmers and the very thinly sown non-farmers around and between them. How far back this condition goes historically, is difficult to say, because, as might be expected, the farmers have left abundant and striking archaeological remains, the gatherers few and scattered ones. The farming population of Pueblo type is known to have been more widespread in Pueblo 2 time, say in the general period of 500 to 900 A.D. But there probably were non-farmers near them, if not in immediate contact, even then.

The basis of this duality of the Pueblo-Southwestern economic system, whether it is relatively recent or ancient also, lies obviously in the nature of the land. The Southwest is an arid region, steppe and mountain or semi-desert where not desert. Farming, with patience, can be made to yield a fairly reliable subsistence; but only in selected spots. The vast majority of the surface of the Southwest was as useless to the Pueblos, for crops, as it is to us. They could and did farm many spots which we do not farm; but that was because they sought only their food, we a civilized living. Allowing, as before, an acre to a person, the 34,000 Pueblos whom Hodge and Mooney estimate for 1680 would have had under cultivation a total of only some 53 square miles—a township and a half. We may double the allowance of land per head to permit of wider spacing of planting or lower yield in the arid Southwest. We may enlarge the population somewhat to

accord with the wider extent of the culture in Pueblo periods 2 and 3. Even this, however, brings the actually farmed land up to a total of only one or two hundred square miles in two or three hundred thousand. This is just about the ratio utilized in the East; but there most of the great unused remainder was farmable, in the Southwest it was not.

The Pueblo, then, resembled the Mexican in using for his crops, if not every inch of productive land, at any rate considerable of the best of it. This makes his subsistence appear more directly of Mexican origin, with but slight transmutations. Where he differed was in that so little of his land was cultivable, and that scattered. He could not become numerous. He therefore did not need states and rulers and a peasantry; the more so as the scattered distribution of his farmable land kept his communities small. On the other hand, once given a concentration in towns, his agriculture became a necessity to him if he was not to starve. This in turn engendered an attitude, a lack of leisure and lack of sense of freedom and enterprise, which would keep him from plunging into chronic warfare as a social mechanism. His population was kept down not so much by being killed off or expelled and disrupted, as by clinging to a narrow shelf of subsistence mechanism without leeway or recourse.

So far, discussion of the Southwest has been in terms of Pueblos and the non-agricultural tribes immediately enclosing them. But populationally, this part of the Southwest forms only a smaller half of even that part of the Southwest which lies within the United States, without counting the related parts of Sonora and Chihuahua. It held 48,300 souls out of 103,000 in the American Southwest. Pima-Papago, Lower Colorado Yumans, and Southern Californians alone, in the non-Pueblo sphere, with 10,000, 13,000, and 26,500 souls, outnumber the combined Pueblo, Apache, and Navaho, even with the Pueblo counted at Mooney's high figure of nearly 34,000. Numerically, then, the preponderant half of the American Southwest was the Gila-Yuman-Southern California sphere, not the Pueblo one. As regards density, the disproportion is even greater; nearly 20 for the former, against a little over 7 for the Pueblo sphere.<sup>12</sup> It is true that the density of the pure Pueblo territory alone was the highest—around 75. But against this in the other half are figures like 31 for Lower Colorado, and 39 for non-agricultural and semi-desert Southern California. The Pueblo-sphere density as a whole is brought down by the abnormally low density (2.3) of the large included area occupied in historic time by Athabascans. This expresses again the oasis-like distribution of the important

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<sup>12</sup> 54,700 in 279,500 km<sup>2</sup> = 19.6, 48,300 in 687,600 = 7.2.

population in the Pueblo sphere, and the contrast between town-dwellers and mescal-gatherers, which recalls nicely in many ways the relation of town-farmers and herders in the Sahara, Arabia, and inner Asia. As against this, the Gila-Yuma-California sphere was much more evenly sown with population, irrespective of whether this was agricultural or not. In one sense therefore this area may be considered as having made a healthier adjustment with its arid environment than the Pueblo sphere.

The archaeological evidence indicates that in the past, in Pueblo 1 and 2 periods, say until about a thousand years ago, the Pueblo proper population was much more widely and scatteringly distributed in numerous small settlements. In other words, its distribution type then approximated that of the Gila-California area. This distribution began to be abandoned with the concentration into larger towns in Pueblo 3 period. This concentration may have been in part due to the pressure of preying tribes first intruding then. But whatever the causes—invasion, drought, inner cultural tendency, or a combination of these factors—once the concentration had begun, it left ever larger areas open to the “nomads,” that is, thinly-sown mescal-gatherers with only sporadic farming, and enabled them to establish themselves and their subsistence adaptation more firmly. The very flowering of Pueblo culture therefore tended to shrink its area, to embody it geographically in a culture of very much lower intensivity, and to put it on the defensive against this. Nothing like this occurred in the western Southwest, where farmers and non-farmers remained in adjustment, and the whole of any given tract continued to be exploited more or less to the limit by whatever subsistence-mechanism was most feasible, without notable “class” differentiation of its culture. The one exception was the Casa Grande type of concentration in the Gila valley, when Pueblid polychrome pottery culture impinged on native red-on-buff; but this was evanescent, and on its collapse, culture returned to its former adjustments.

So far we have been speaking, of necessity, in terms of the American Southwest. If the Mexican portion, for which we have no population data, could be included, the area and population of the Southwest would be increased by approximately half, and its Pueblo-sphere part would presumably shrink in numbers from a minor half to no more than a third. Which goes to show again what different historic concepts “Pueblo” and “Southwestern” are, and the need of their not being used interchangeably.

#### NORTHWEST COAST

The figures for the areas within the Northwest coast also carry a story, though they must be used with a certain reserve because in some of the

areas the land itself was so little or secondarily used that length of frontage on shore or river was evidently the decisive factor as regards population. Still the areal densities mean something. They are:

*Areas*

Lower Columbia (Chinook, etc.) . . . . .	64
Lower Klamath (Yurok, etc.) . . . . .	50
Gulf of Georgia (Coast Salish) . . . . .	33
Central Maritime (Wakashan, etc.) . . . . .	29
Northern Maritime (Northern tribes) . . . . .	17
Puget Sound (Coast Salish) . . . . .	17
Willamette Valley (inland) . . . . .	9

*Sub-Areas*

Central Maritime, South (Nutka, Makah, Quinault) . . . . .	65
Northern Maritime, Archipelago (Haida, S. Tlingit, Tsimshian) . . . . .	22
Central Maritime, North (Kwakiutl, Heiltsuk, B. Coola) . . . . .	17
Northern Maritime, River (Niska, Gitskyan, Haisla) . . . . .	10
Northern Maritime, Mainland (N. Tlingit) . . . . .	10

The Willamette area is a wholly inland one. We do not know with certainty whether it should be reckoned as part of the Northwest Coast or the Columbia-Fraser plateau. Puget Sound, although salt water, also extends its inlets far into the interior, and the area is a quasi-inland one. Apart from these two minor areas, the other five range almost in geographical order, with density decreasing from south to north. The sub-areas within the two northern areas again show almost the identical arrangement. Even if Mooney's computations for the Chinook and Gulf of Georgia Salish are taken as somewhat high, the generally greater density of the south as against the north remains fundamentally unimpaired. On this point, too, shoreline density would not invert the situation, the northerly areas having the more irregular, indented shore, whose ratio to the already lighter population would go up faster even than their land areas. The difference seems to lie in this: The northern groups were essentially maritime, mostly lived fronting the beach, and made little use of the land which they owned. The southern groups lived on river and tributary as well as on the shore, perhaps more largely so in fact,<sup>13</sup> and often made genuine

<sup>13</sup> In Handbook of California Indians, 117, I have computed a population per shore mile of salt water of 10 and 15 for Wiyot and Yurok, and of 20, 35, 25, and 30 per mile of navigable river for the same two groups and the Karok and Hupa; or a mean of 28 versus 12 in favor of river. All the groups are in northwest California.



use of their land holdings. Their habitat utilization and culture remained more generalized and simpler, those of the northern groups were more specialized and extreme. As in the Southwest, on comparison of Gila-California with Pueblo sphere, the more generalized method in the long run allowed of a heavier aggregate population.

This set of facts also seems to re-enforce an interpretation of Northwest Coast culture development suggested elsewhere.<sup>14</sup> If the generalized southern areas represent, as seems reasonable, the survival of an earlier phase, it is the northern areas which have specialized away from this, and their type of culture must on the whole be the more recent. Whether this specialization was mainly the result of an internal development leading to a shift from river to inlet to ocean shore where the shore was most favorable, or was brought about by Eskimo or Asiatic or trans-Oceanic contacts and influences, is another and difficult problem, but one which may prove soluble to those in position to analyze intimately the whole of Northwest Coast culture; though they also can hardly come to a final conclusion without taking into detailed consideration the geographic setting. For the present we can content ourselves with the findings that it is the southern half of this major area which was the more densely populated, more generalized in its subsistence adaptations, and more ancient in its type of culture; and that the habitat and subsistence adjustments of the northern half, and the intensity of its development in art, ritual, and property distribution, were relatively recent.

#### ESKIMO

For the Eskimo areas, the range of land-area densities is:

Aleut . . . . .	65
Pacific Coast (excl. Bering sea) . . . . .	19
Western (Bristol bay to Mackenzie river) . . . . .	4.9
Central-Eastern. . . . .	2.3
Caribou .. . . .	.4
Total Western . . . . .	8 1
Total Eastern . . . . .	2 1

Land areas mean particularly little in comparison with shore line in the case of the Eskimo, whose life depends on water and ice far more than on what the land bears. Still, the figures give a crude approximation to shore-mile density, even if the Aleut population of 16,000 should prove too high. How far the higher latitude of the three low-density areas may be a factor must also be considered.

<sup>14</sup> In the unpublished monograph on areas.

Still, the figures on their face show this: Nearly a third of all the Eskimo lived on open Pacific ocean frontage—27,300 Aleut, Kaniagmiut, Chugachigmiut, and Ugalakmiut out of 89,700. From the Malemiut south, that is, roughly, in Alaska from Bering strait south, were almost 60 percent all members of the stock—53,000 out of 89,700. This is the region of masks and wooden houses and grave monuments and property distribution festivals and war fleet expeditions, traits which we are wont to regard as characteristic of the Northwest Coast. It is also the region where ice-hunting of seals, the sledge and the snow-house, and many other "typical" Eskimo traits are lacking or nearly absent.

In other words, "pure" or characteristic Eskimo culture obtains only among two-fifths of the members of the stock. Three-fifths live in a culture heavily charged with elements usually regarded as Northwest Coast or Asiatic, and lacking much of the inventory of "typical" Eskimo life. It is obvious that our concept of what is Eskimo is due to a first approach from Greenland, and next Labrador, Baffinland, and the Central region. Had our knowledge begun in Alaska, where population centers, and where the comparative density is overwhelming, our most "typical" Eskimo would probably seem merely peripherally reduced and atypical. Just what this means for the origin and history of the culture is hard to say. Most such evidence can be read two ways. The final word must be by specialists on the Eskimo. But the population distribution cannot be left out of account.

#### SHORE LINE POPULATION DENSITY

The obvious importance of tidal shore line population density, especially in connection with the Eskimo, has led me to inquire into the problem. United States data are from Coast and Geodetic Survey figures. Canadian data were courteously furnished directly by the Hydrographic Service of the Dominion. The allotment of the shore line among tribes is by myself, according to the basic tribal map. I have also had to estimate, in a number of cases, what portion of a tribe was to be counted as living on or actively using the shore, and what portion as essentially interior. The detailed results are scarcely of significance here, so I give only a summarized tabulation.

On the whole, the shore-line densities agree rather strikingly with the areal densities of coastal regions. In a rough way, the native population for each mile of tidal shore line was about the same as that of 100km<sup>2</sup>. The concentration of the Eskimo in the west is as notable on a shore-line as on an areal basis. The same is true of increasing density as one proceeds

TABLE 4  
SHORE LINE AND POPULATION

Area	Peoples	Miles of shore line	Population	Persons per mile
	<i>Arctic Coast</i>			
1a	Greenland, inhab. part	6,000	10,000	1.7
1a	Labrador. . . . .	2,450	3,600	1.5
1a	Central Eskimo . . . . .	17,150	16,600*	1.0
1b	Caribou Eskimo . . . . .	500		
2a	Mackenzie R. to Alaska peninsula	14,400	31,500	2.2
2b	Aleut. . . . .	3,500	16,000	4.6
2c	Pacific Ocean Eskimo	4,000	11,300	2.8
	<i>Northwest Coast</i>			
1	Northern Maritime. . . . .	6,100	23,300	3.8
2	Central Maritime. . . . .	2,600	17,300	6.7
3	Gulf of Georgia . . . . .	1,200	23,700	19.7
4	Puget Sound . . . . .	1,000	6,000	6.0
5	Lower Columbia, coastal part. . . . .	650	12,000	18.0
7	Lower Klamath, coastal, incl. S. Oregon . . . . .	300	6,000	20.0
	<i>Intermediate</i>			
2	Mattole to Salinan	800	14,000	17.5
	<i>Southwest</i>			
9, 10	Chumash to Diegueño . . . . .	600	15,000	25.0
	<i>Eastern</i>			
3	Coahuiltec to Atakapa . . . . .	1,900	6,300	3.3
1a	Southeast proper: Chitimacha to Apalachi. . . . .	3,000	23,000	7.7
1c	Timucua . . . . .	1,200	8,000	6.7
2	South Florida. . . . .	1,500	4,000	2.7
1a	Southeast, Stono to Yamasí. . . . .	1,600	4,400	2.8
12	Southern Siouan to Powhatan . . . . .	3,700	18,500	5.0
11	Conoy to Delaware . . . . .	2,050	8,700	4.2
11	Montauk to Pennacook . . . . .	1,800	21,100	11.7
10	Abnaki and Micmac . . . . .	5,250	7,300	1.4
	<i>Northern</i>			
15	Montagnais . . . . .	600	1,000	1.7
15	Beothuk . . . . .	3,050	500	2
15	Cree . . . . .	1,300		
16	Caribou-Eater . . . . .	100		
16	Cook Inlet Athabascans . . . . .	500	500	1.0

\* Includes Mooney's 6,000 on "islands west of Baffinland." Without these, the density is only 0.6.

southward along the Northwest Coast. The high density of the southern Northwest Coast is maintained along the shore of the California and Southwest areas. Here, in fact, the continental maxima (Mexico excluded) are attained. Atlantic coast densities are on the whole lower than Pacific. The farming tribes run a shore-mile density two or three times that of the non-farming ones of Texas, Florida, Maine, and Nova Scotia. Wholly unexplained is a peak of density for the stretch from New York to Boston—not so high as that along the Pacific coast from Cape Mudge to San Diego, but easily the highest on the Atlantic side.

North of Mexico there may be reckoned some 80,000 to 90,000 miles of inhabited shore, occupied, or regularly used at least seasonally in native times by about 300,000 people—around three-tenths of the total population of this major portion of the continent. The density thus was under 4 souls per mile—say 6 per km. Of the total, the Eskimo held well over half of the mileage, but constituted little more than a fourth of the population, their average density being less than 2, as against 6 for all the rest. Evidently the skillful and intensive exploitation of their coast by the Eskimo did not enable them to maintain more than a fraction of the population which milder shores plus land utilization sustained elsewhere. The grand averages are: Eskimo, 1.7, northern Northwest Coast, 4.7; southern Northwest coast, California, Southwest, 16.4; Eastern areas, 4.6, Northern areas, 0.4.

#### MEXICO AND CENTRAL AMERICA

For Mexico and Central America there exists nothing like Mooney's complete group-by-group series of population figures. The contemporary and documentary data seem never to have been gone over systematically, let alone assembled. The estimates here given therefore represent nothing more than opinion based on impressions and somewhat moulded by comparisons with densities north of the Rio Grande.

My areal measurements and population estimates run as follows:

For present purposes, four main areas may be recognized in Mexico-Central America: (1) Northwest Mexico, which affiliates with the "Southwest" of the preceding pages, in fact is in the larger sense a part of it culturally. (2) Northeast Mexico, mainly non-agricultural and of low culture, a large area, interior and on Atlantic drainage, north of the Mesa Central. (3) The region of higher culture, comprising the Mesa Central and adjacent parts of Mexico, together with Guatemala and Salvador. (4) Area of lower culture to the southeast, about corresponding with Honduras and Nicaragua. Costa Rica and Panama belong to South America, ethnically and probably culturally.

TABLE 5  
MEXICO-CENTRAL AMERICA

	Km <sup>2</sup>	Population	Density
"Southwest," i.e., northwestern Mexico: Sonora, California, parts of Sinaloa and Chihuahua: Opata, Pima, Cáhita, Tarahumar, Seri, Cochimí, etc... ..	357,300	100,000	28
Northeastern Mexico: Zacatec, Tepe- huan, Concho, Lagunero, Guachichil, Pame, Tamaulipeco, Coahuiltec, etc.	666,700	100,000	15
Region of higher culture (incl. Huastec, Otomí, Jalisco, S. Sinaloa).	1,025,800	3,000,000	292
Nicaragua and Honduras. . . . .	247,700	100,000	40
	2,297,500 <sup>15</sup>	3,300,000	

These are some justifications for the populations estimated:

The American Southwest, as per Mooney, had 103,000 people in a million km<sup>2</sup>. For the Mexican "Southwest" an allowance of 100,000 in a third of a million km<sup>2</sup> seems liberal.

A hundred thousand also seems liberal for the two-thirds million km<sup>2</sup> in mainly non-farming northeast Mexico. The resulting density of 15 is about the same as in the agricultural southeastern United States, and five times as great as in non-farming south Texas.

High-culture Mexico, whose area is not quite 5 percent of the continent, is by my estimate given 70 percent of the native population. Its average density of nearly 300 is 55 times the average density north of the Rio Grande, and far heavier than that of the most populous and restricted tribal territory there. It outweighs the California density 7 times, the Northwest Coast density 10 times. All this is no proof of how many Indians there were in Mexico; but it does suggest that there are likely to have been no more than here assumed.

Comparison with the historic period shows some interesting results.

1. After the first shock of conquest and epidemics, the native population seems to have increased, owing perhaps to cessation of intertribal war-

<sup>15</sup> Includes c. 60,000 km<sup>2</sup> of Coahuiltec territory in U. S.; excludes c. 100,000 km<sup>2</sup> Apache territory; corrected, 2,337,500 km<sup>2</sup> by planimeter measurement, as against 918,000 m<sup>2</sup> or 2,378,000 km<sup>2</sup> usually given for the five countries.

fare, and then remained about stationary. Willcox<sup>16</sup> computes 5,115,000 in Mexico and Central America in 1650, 5,400,000 in 1793 (per Humboldt, New Spain from 10° to 38°). The present population, exclusive of Costa Rica and Panama, is about 22 millions. In the four or five generations since 1793, with much internal disorder instead of the profound Spanish colonial peace of the preceding two centuries, the population thus quadrupled. The fact is more striking than intelligible as to its causes.

2. Mexico is about 60 percent Indian in blood, Guatemala more so, if one counts not only recognized Indians but their equivalents in mestizos. This proportion gives about 10 million Indians today in southern Mexico and Guatemala, the region of ancient higher culture, as against 3 million in native times. The change of course is in reverse direction from that in the United States. The primary cause of the difference seems to be that in New Spain the settled Indian was fitted into the Colonial (and nineteenth century) economic scheme, which in fact was built upon him; whereas in Anglo-Saxon America, broadly speaking, the Indian did not fit into the economic plan and was thrust aside.

3. On the local distribution of densities there are certain considerations, too lengthy to be gone into here, which indicate that relative to one another, these have on the whole changed rather little. Cushing's map of modern population in Mexico in the *Geographical Review* for 1921 may therefore be considered as giving an approximate picture of the distribution of population in Mexico before the Conquest, subject to the following two modifications: (1) the density symbols are to be read with a value of about one-fifth in central and southern Mexico, about one-tenth in the north; (2) northern urban concentrations due to mining, industry, irrigation, or government are to be omitted.

#### THE HEMISPHERE

By pushing a little further, we can add one more to several estimates recently made as to native population of the hemisphere.

Sapper<sup>17</sup> reckons about 40 to 50 millions in pre-conquest days. This total includes half a million north of the Great Lakes, 2 to 3 millions to the Rio Grande, between 17 and 21 in Mexico and Central America, 3 to 4 in the West Indies, 12 to 15 in the Tropical Andes. By Mooney, Sapper's impressions are three times too high for north of the Rio Grande. At the same ratio, his hemispheric total would shrink to around 15 millions.

<sup>16</sup> Increase in the Population of the Earth and of the Continents, pre-printed from *International Migrations*, vol. 2, National Bureau of Economic Research (1930).

<sup>17</sup> ICA (the Hague, 1924), 21·95-104, 1924.

Spinden<sup>15</sup> discards impressions as to population and density for argument justifying multiplication by hypothetical factors. His article is stimulating and imaginative but soars far away from facts. He settles on 50 to 75 millions around 1200 A.D., less at the time of conquest.

Willcox<sup>16</sup> is concerned with world population growth in the last three centuries, but his computation for the Americas in the mid-seventeenth century is of interest because it allows approximate reference back to the native period.

U. S., Canada, Alaska . . . . .	1,002,000
Mexico and Central America, total	5,115,000
West Indies . . . . .	614,000
S. A., central Andean plateau district (400,000 sq. mi.)	3,036,000
S. A., remainder . . . . .	3,334,000
	<hr/>
Hemisphere, all races, c. 1650 A.D..	13,111,000

My own estimates rest essentially on the assumption that the relation of Peru to the remainder of South America was similar to the relation of Mexico to the remainder of North America; and on the nature of the latter relation, as just discussed.

TABLE 6

## PRE-CAUCASIAN POPULATION OF THE HEMISPHERE

North of Rio Grande, Mooney detailed total reduced by	
impression . . . . .	900,000
N.W. and N.E. Mexico, probably less than	200,000
C. and S. Mexico, Guatemala, Honduras	3,000,000
Honduras, Nicaragua . . . . .	100,000
Native North America . . . . .	4,200,000
Inca Empire . . . . .	3,000,000
Remainder of S. America, incl. Panama, Costa Rica	1,000,000
West Indies . . . . .	200,000
Native South America . . . . .	4,200,000
	<hr/>
Western Hemisphere, 1492 A.D.	8,400,000

These figures are of course not to be taken too literally: 8,400,000 means essentially somewhere in the neighborhood of 7 to 10 millions as the most probable number.

<sup>15</sup> Geogr. Rev. 18, no. 4, 1928, reprinted SI-R 1929. 451-471, 1930.

I hope that the lowness of these figures will challenge to correction, if correction can be produced. I admit that it may prove that my total of 8,400,000 will have to be doubled. But I believe it just as likely that it may ultimately be halved. I set it up as my best present opinion and as a mark to be shot at.

Real progress in this subject will come only in one way: by the intensive examination and analysis of sharply localized documentary evidence of as early date as possible. The astonishingly excellent archival system of Spanish America brought it about that many pertinent data were recorded, and a fair number of these are undoubtedly extant, some perhaps already in print. The first and most arduous task is probably the finding of these data and their evaluation in terms of the precise areas and groups involved. The principal other requisite is a certain tact in interpreting such scattered and localized records into a larger picture with constant reference to both terrain and cultural habits, and with a minimum of the mechanical multiplications which are so likely to conduct to misleading and usually exaggerated results.

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## PATRILINEAL AND MATRILINEAL ORGANIZATION IN SUMATRA

By EDWIN LOEB

### PART 2. THE MINANGKABAU

**H**ISTORY.—According to Minangkabau tradition the kingdom was founded by Alexander the Great. Actually the kingdom of Malayu, which extended to the present site of Minangkabau, was established by Hindu colonists by the seventh century A.D. The name Minangkabau first seems to have appeared in a list of 1365 A.D., giving the names of lands and districts in Sumatra which owed tribute to the Javanese kingdom of Madjapahit.<sup>1</sup>

The folk etymology of the name "Minangkabau" dates from the time during which the kingdom was struggling to retain its independence. The story is that at one time the Javanese of Madjapahit came with a great army to conquer the land. The chiefs of both sides decided to settle the issue by a fight between two karabaus. The Malays thought of a trick, and allowing a buffalo calf to hunger for ten days, bound a sharp iron point to its nose and set it free to run full tilt against the belly of the Madjapahit buffalo. The starving calf in thus attempting to obtain milk killed its Madhapahit adversary. In commemoration of this event the Malay conquerors named their land and people "Manang Kabau" after the conquering buffalo. The story is still fully accredited among the people, and the karabau is the symbol of national unity.

In a more prosaic manner, Van der Tuuk derives the name from "pinang kabhu," an archaic expression which means "original home." This derivation seems the more likely, since Minangkabau was in fact the cradle land of the Malays. While about one and a half million Malays have remained in Minangkabau proper, an equal number migrated in Hindu times to Malacca and other coastal places of the archipelago. These Malays, often called the deutero-Malays, have adopted a patrilineal form of family organization. Their language is slightly different at the present time from that spoken in the home land, Minangkabau.<sup>2</sup>

In the fourteenth and fifteenth century the ancient kingdom of Minangkabau covered the whole of central Sumatra. This kingdom was divided into three parts: the three "luhaks," the three "rantaus," and the eight "babs." To the luhaks, or districts, belonged Tanuh, Datar, Agam, and

<sup>1</sup> Lekkerkerker, 125

<sup>2</sup> Eerie, 1920, 246, Lekkerkerker, 119

the Lima-puluh (15 towns). Today these districts form the environments of Fort van der Capellen, Fort de Kock, and Pajakumbuh. These three luhaks formed the kernel of the kingdom of Minangkabau. The three rantaus, states, which stood in loose relation to the central province, although they recognized the supremacy of the maharadja of Minangkabau, were: Rantau Kampar, Kuantan (Indragiri), and Batang Hari. Once every three years the ruler visited these provinces. The eight babs, the entrances and exits to the kingdom, were the large seaports: Padang, Priaman, Indrapura, Djambi, Indragiri, Siak, Painan, and Benkulen. The connection of the babs to the luhaks, or central provinces, was very loose, and at an early date they became entirely separated from the central kingdom.

In the beginning of the seventeenth century, when the Dutch came to Sumatra, the kingdom of Minangkabau was already on its way toward complete disintegration. The kingdom at this time was composed of a collection of Lilliputian village states, or negari, ruled by petty rajahs. The overlord ruler at Palembang, the Jang di Pertuan, was a mere figurehead. In 1680 when King Alip died without leaving any direct heirs, the kingdom was divided into three parts. In the nineteenth century the rule of the ancient kingdom came entirely to an end, the Padri rebellion giving it its final death blow.<sup>3</sup>

It is impossible to give an exact date for the introduction of Mohammedan law and customs into Minangkabau. According to Willinck, Mohammedan Atchenese pirates roved the coast and upon occasion penetrated into the interior as early as the last half of the fourteenth century. While the introduction of Islam is usually assigned to the middle of the sixteenth century, Willinck claims that a great part of the Highlands was still unconverted in the latter part of the eighteenth century. In the beginning of the nineteenth century Mohammedan priests (the Padri) became discontented with the pagan state of the country and resorted to force, killing and enslaving all who resisted the introduction of the strict Mohammedan law. Nevertheless the people persisted in maintaining their matrilineal adat and merely made formal and outward concessions to Moslem promptings. In matters of religion, however pagan they remain at heart, they make public pretense of Mohammedan ceremony and prayer. The social and political organization of the people is at present a bewildering intermixture of pagan matrilineate and Hindu and Mohammedan patrilineate, all functioning under Dutch rule.<sup>4</sup>

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<sup>3</sup> Maass, 38-40, Collet, 86, E-NOI, 739.

<sup>4</sup> Willinck, 40.

*Government.*—The government of Minangkabau is essentially tribal rather than territorial, and the actual rulers of the land are the sib (suku) heads, the *datuq nan berampè*. These heads, as will be explained presently, receive their orders from lower family councils, and therefore are representatives rather than governors.

Nominally, in Hindu times, the independent village states, or *negari*, formed one nation, with one language, and one ruler, the *Jang di Pertuan*. Actually, this *radjaship* was utterly foreign to native concept and never integrated with the Minangkabau *adat*. While in Minangkabau exogamy and matrilineal succession are the rule, the *radjas* always married within their own family, and the eldest son succeeded his father to the throne.

The only authority the *radja* had was that of intermediary in the petty wars fought between the *negari*. When such a war had lasted a long time without a decisive victory, the *radja* sent a messenger with a yellow umbrella to the struggling *negaris*. This emblem was planted on the battlefield for the purpose of establishing peace. If both parties continued the struggle, however, the *radja* did nothing further in the matter. He had no army to enforce his power, nor did he try to arbitrate.

The Hindu line of *radjas* appeared satisfied with the honor and the taxes paid them. They were kings without soldiers: the poorest pretense at monarchs the world has known. With their disappearance, the actual government of the *negari* went on as before.<sup>5</sup>

While, then, the *negari* is the autonomous state, actually this concept also is apt to be misleading, for in each *negari* there must be representatives of the four sibs (*suku*), and the heads of these furnish the highest council. The sibs, in fact, could function equally well without the *negari*, which is but the Hindu idea of territorial government superimposed upon the native rule by genealogies.<sup>6</sup> In fact, mere residence within a *negari* does not furnish a stranger with rights of citizenship; for this he has to be adopted into a sib.

All of the *negari* have fixed boundaries (supposed to have been established by the first settlers) consisting either of natural features—such as rivers, trees, or large stones—or artificial landmarks. Formerly all the inhabitants of a *negari* knew these landmarks and considered them sacred. Wars never were waged for the purpose of land seizure, nor could the boundaries be changed, even with the consent of the land owners.

The town itself, formerly fortified by hedges, walls, and even moats, is

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<sup>5</sup> Willinck, 72.

<sup>6</sup> The word *negari* itself is the Sanskrit *nagara*, city.

the only inhabited portion of the negari. The town is called kota as among the Bataks<sup>7</sup> and consists of a group of family houses (rumah kumanakan) and rice granaries.<sup>8</sup> In each town there is also a council and communal house (balai) and a mosque. The balai serves as sleeping quarters for the youths above the age of eight.<sup>9</sup>

It is the suku, or rather that portion of a suku which resides in a certain negari, and not the negari, which furnishes the highest unit of government. Unfortunately, the history and significance of the suku is by no means clear. In Malay the word means "leg" or "fourth part." Evidently, however, the word is original to Minangkabau, since here the suku corresponds to the sib (marga) of the Bataks. The fact that originally the Minangkabau had four suku no doubt caused suku to have the meaning of "four" among the deuterio-Malays. Certainly the word does not necessarily mean four, for the Gajo sib is called either kuru or suku, and in the Lampong district suku is likewise sometimes the name of relatives in a village.

The Minangkabau themselves believe the suku to be of Hindu origin and ascribe their founding to the sons of a mother Indo Djati. Certain Dutch ethnographers, including Willinck and Westenenk, believe that the suku were founded by the Hindus for governmental purposes. It appears probable, however, that the Hindus found a sib system here, as elsewhere in Sumatra, and made use of it for governmental purposes.

Originally the four suku were the exogamous units of Minangkabau. They again were divided into two sections, or moieties, called laras and named after the suku of which they were composed. Thus one laras was called Bodi-Tjaniago and the other Koto-Piliang. The word "laras" is Javanese and means "symmetrical" or "harmonious." The presumption is, therefore, that the Hindu-Javanese found the Minangkabau suku divided into two unnamed parts, which they called laras.

The Minangkabau people have two traditions concerning the laras. According to the first, these moieties were instituted in legendary times for the purpose of preventing incest, and later split up into the four suku. According to the second tradition the laras were instituted as territorial divisions from which the present negari have arisen.

At the time of the conversion of Minangkabau to Mohammedanism the laras were already territorial units, each with slightly different adat. Bodi-

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<sup>7</sup> From Sanskrit *kuta*, a fortified place. This type of fortification is common in Assam and western Indonesia, but lacked military justification in Minangkabau.

<sup>8</sup> The first settlers in a kota belonged to a single family division, or *kampueng*. The Malay word *kampung* now means a territorial division or town.

<sup>9</sup> Willinck, 92-104; Lekkerkerker, 136.

Tjaniago had the milder criminal code of the two. The arrangement of the balais was also different in the two laras; in Bodi-Tjaniago the flooring was level so that all the chiefs sat at the same height, while in Kota-Piliang certain chiefs sat on an elevation.

At the present time the four original suku have split into a large number of smaller exogamous units, each bearing its own name. Some authorities state there are twenty-four of these, while others claim twenty-seven. The divisions of a village, the hamlets, also have been named suku, since each division would naturally be inhabited by one genealogical family and hence acquire a suku nomenclature. Thus, if a village is inhabited by four of these "large families," it would be said to have four suku or quarters.<sup>10</sup>

The actual smallest independent unit of government in Minangkabau is the sa-buwah-parui, which consists of all those who have descended from a common female ancestor. The sa-buwah-parui, then, comprises the children, their mothers, aunts, uncles, cousins, grandmothers, greataunts, and greatuncles, usually up to the fifth generation,<sup>11</sup> "all those who have the same dwelling district and the same tomb, the same dwelling place and rice fields."<sup>12</sup> The sa-buah-parui lives in a section of a village and has over it a chief or panghulu (*I* on chart). The chief is chosen from the male relatives of the oldest woman of the lineage, as the name implies—hulu meaning "to begin" or "the first."

The lineage again is divided into branches, or families, called djurai. Each djurai lives in a separate house and is ruled over by the oldest brother of the oldest woman of the house, providing the man be fit for the office. Thus *I* and *b* are mamaqs of their respective houses *B* and *C*. It must be noted that the term mamaq means mother's brother here as among the Karo Batak and is Tamil in origin.

The family houses are oblong, built on four poles. They are decorated with buffalo horns and have projecting roofs and long projecting balconies. Stone steps lead up in front. Each family in the proper sense of the word—that is, mother and children (sa-mandeh)—has a separate room and fireplace in the house. When a woman of the house marries, an extension is made to the right or left, and a new partition added to the house. The head of the house may be simply a mamaq, or, if he also is head of the sa-buah-parui, may have the title of panghulu.

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<sup>10</sup> E. NOF, 821, Bezemer, 63, Joustra, 91; Collet, 438; Willinck 124.

<sup>11</sup> See chart, p. 37.

<sup>12</sup> Collet, 438.

In the Highlands a single rumah-kamanakan sometimes houses seventy to eighty persons descended from the same ancestral mother.<sup>13</sup>

The government of Minangkabau rests primarily on two councils—that of the village panghulus, who meet in the village balai; and the four heads of the negari suku, the datuq nan berampè, who meet in the negari balai. While the actual enforcement of law rests with the mamaqs and the panghulus, the executive power is in the hands of the suku chiefs.

The panghulu has a double function. As a mamaq he is a simple house father, acting upon the advice of his house companions. As a panghulu he is representative of his family in the state and is alone responsible to the other panghulus and the suku heads; he must see that his underlings keep the adat and the Mohammedan law (sjarat) or be punished; he is the *trait d'union* between his sa-buwah-parui and the suku, and between his family and the negari. The panghulu is also the repository of family traditions. He sees to it that the members of his family perform their appointed tasks: the making of roads, building of balais or mosques, etc. He is also responsible for the fidelity with which the mamaqs under him perform their tasks toward their various djurai.

The panghulu has the duty of bringing the demands of his family to the attention of the suku chiefs and to the other panghulu when they are sitting in council. If he fails to act as just representative, his family may complain over his head, and he may be displaced or even cast out of his family. . . .

The panghulu always must be informed of everything that happens within his family among the anak-buah (members of sa-buwah-parui). No child can be born, no death occur, no marriage contracted, but the panghulu must be informed of it. No contract can be closed by his anak-buah, no money given out, or land given in lease, no important act of trade, but that he must receive word. He keeps account of the harto pusako (the communal property) and the harto pantjarian (the individual property) in his family. Not alone does he know the affairs of his own family, but he also knows the internal history and the anecdotes of the other sa-buwah-parui in the negari. When he becomes aged and feels that the end of his life is close at hand, he hands over these traditions to his younger successors.

The panghulus possess no executive power but are mere representatives of their families. Executive power rests alone in the hands of the suku chiefs. But these act more as advisors than as law makers. They also receive their orders from below and are unable to do anything of their own initiative.<sup>14</sup>

Several important points must be noted in this system of government, the most truly democratic form which could be devised: (1) The real

<sup>13</sup> Willinck, 110.

<sup>14</sup> *Ibid.*, 171-180.

sovereignty of the state rests with the individual sa-mandehs or families. A mamaq never forms decisions on his own account: important questions first are discussed in each household under the direction of the Indua, the oldest woman of the house, and then debated among the masculine members of the family and the mamaqs who carry out their orders. (2) All decisions must be merely interpretations of the dual constitution, the native adat and the Mohammedan law. (3) All decisions must be arrived at by unanimous vote. In Manangkabau there can be no tyranny of a majority over a minority. Dissenting members of a council, however, can be cast out of the family or even out of the community. (4) Minangkabau rule is a true gerontocracy, for the oldest male member of each djurai is eligible for the position of mamaq, the mamaq of the oldest djurai of the sa-buwah-parui should become panghulu, and the oldest branch of the suku in the negari should place its panghulu in the negari council.

This system, then, stresses universal suffrage, security of possessions, and immutability of constitution. It is bound to the traditions of the past and would be ill-adapted to the vicissitudes of war or commerce. It has maintained the average male above the line of poverty and provoked the immigration of the more energetic.

Similarly to most primitive communities, accession to office is a matter of inheritance—here through the female line—with the proviso that the successor have the proper qualifications. A candidate for the office of panghulu must be normal, both physically and mentally, and must always have conformed to the adat. He must have capacity for the position, be neither over or under opinionated, and trustworthy. If he be too young, an older relative performs the functions of the office for him. Before a man is “lifted up” to the position, the consent of his family must be obtained. Then the family candidate must be approved by the head of the suku. If the datuq nan berampè cannot agree on the family choice, another candidate from the same line has to be chosen.

That the rewards of office are honorary rather than pecuniary is another primitive factor in the Minangkabau adat. The panghulu inherits an honorary name, galar pusako, which can be freely mentioned in place of his real and secret name. This honorary name is thought to outdate Hindu times, cannot be altered, and is handed down in the family with the position. Then again the panghulu is entitled to wear special clothing and the kris as emblems of office. He is only treated as panghulu while wearing these badges of office. Finally, the panghulu has a special place of office at festive occasions.

Both honors and status are pyramided in Minangkabau, and the suku

chief receives all the honors and titles of lower positions as well as his own special prerogatives. As *mamaq* he is simply the house father of the oldest *djurai* of his family, as *panghulu* he is an officer of the state in their midst, as *datua nan kaampe* he is the highest state head in the complex of families forming his *suku*, and, finally, in conjunction with the three other *suku* chiefs he forms the governing body of the *negari*.<sup>15</sup>

*Social classes.*—Unlike the Batak, the Minangkabau lay but little stress on social classification. Indeed, before the days of Hindu influence, there could have been no classification between individuals other than age distinction. At present, the nobility are called *urang bangsa* (*bangsa* from Sanskrit *vaṃṣa*, race). The “nobles” are the oldest families in the community and therefore supply the head officials. Families endeavor to marry their daughters off to other families of equal standing or antiquity.

Likewise, slavery originally was unknown to matrilineal Minangkabau, although it flourished in the patrilineal communities of Nias and Batakland, owing primarily to war and debt—institutions almost foreign to Minangkabau adat. While Hindu civilization introduced the idea of slavery,<sup>16</sup> it was not until the Padri rebellion that it became widespread.

*Property.*—Minangkabau property at the present time is divided into two classes: communal property (*harto pusako*), and private property (*harto pantjarian*). The word *pusako* is borrowed from the Sanskrit and means in the original language “those things which serve to sustain life.” In Indonesian *pusako* means “inherited things.” It appears probable that at one time all Minangkabau property was *harto pusako*.

There is no law of testament in the Highlands of Minangkabau, since after the death of an individual his *harto pantjarian* is simply joined to the *harto pusako* of his *djurai*. Even during his life the individual has not full control over his own earnings (*harto pantjarian*). He has full use of his private property and can enter into contracts concerning it without the consent of his *mamaq*, but so far as it consists of immovables he cannot give it to strangers or even to his own wife and children.

The *harto pusako* may be immovable possessions, such as rice fields, cultivated fields, brush or meadow land, houses, rice granaries, and stables. But it may consist equally well of movable goods, such as gold and silver work, costly clothing, weapons, *karabau*, and cattle. The *harto pantjarian*

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<sup>15</sup> Willinck, 208.

<sup>16</sup> An escaped criminal in Hindu times could seek refuge at the home of the *radja* and thereby become his slave.



likewise consists of both movable and immovable goods. The earnings of the day mechanic and of the merchant are *harto pantjarian*. The cultivator of a piece of waste land takes the land as *harto pantjarian*. In short, all the property which a person possesses as *harto pantjarian* rests on personal labor.

The oldest *harto pusako* are known as *harto manah* and are inherited from the ancestral mother. All the members of the *sa-buwah-parui* have a claim on this. But the *harto pusako* which is acquired later belongs to the various branches (*djurai*). As property becomes *harto pusako*, only the succeeding, not the lateral or preceding, generations have claim to it. The *mamaq* is administrator over the *harto pusako* which belongs to his *djurai*, and the *panghulu* is administrator over the *harto pusako* which belongs to his *djurai* and the *harto manah* which belongs to the entire *sa-buwah-parui*.

The property system of Minangkabau acts as a preventative to the squandering of wealth. Yet there are cases where the *harto pantjarian* is not sufficient, and the *harto pusako* has to be loaned or rented out. It is only sold, however, as a last resort and with the consent of the entire family.<sup>17</sup> According to the *adat* the *harto pusako* can be sold for debts which had been contracted:

1. To pay the cost of burial of a family member.
2. To meet the expense of marrying out a virgin.
3. To prevent the family house falling into decay
4. In former days to pay *weregild* (*bangun*) when the slayer himself had not sufficient property
5. At the present time a few families are willing to pay the expense of a trip to Mecca of their members out of the *harto pusako*.

The *harto pusako* is divided up only when a *sa-buwah-parui* goes into division. If, however, a daughter section migrates into another *negari*, it loses its share of the *harto pusako*.<sup>18</sup>

*Land*.—Real estate in Minangkabau is always privately owned by a *negari* in the first place, and then, if cultivated, given either to a *sa-buwah-*

<sup>17</sup> It is possible to buy treasured heirlooms in Minangkabau, provided one pays a high enough price. A very fine collection was obtained in recent years for the Field Museum (Chicago). It is also possible, although very difficult, for a European to buy land outright from a *sa-buwah-parui*. While I was in Fort de Kock a resident told me that he bought the plot for his residential house but that the transaction had covered years. Every so often a native would appear, claim that he belonged to the family which had sold the property, and demand compensation.

<sup>18</sup> Willinck, 595-618; Bezemer, 63-65.

parui as harto pusako, or to the individual reclamer as harto pantjarian.

Land is divided into two categories: tanah mati (dead land) or jungle land, and tanah hidui (living land) or cultivated land. The tanah mati belongs to the negari, but unless worked cannot become the private property of families. It belongs to the inhabitants of the negari as a whole, who have the right to gather jungle products and to hunt and fish on it. The tanah hidui consists of wet and dry rice fields, as well as all pepper, sirih, gambir, coconut, and other fields. Cultivated land belongs to the original reclamer and is inherited as harto pusako by the children of his sisters.

Cultivated land actually is owned by the negari and the individual families merely enjoy the usufruct. Repeated divisions of the cultivated soil are made by the negari chiefs and no family is allowed to retain more than it needs. In this way an equitable allotment of landed wealth is attained, and there is no danger of estates becoming either too large or too small for economic exploitation.

The women of Minangkabau are the chief cultivators of the soil, and through the native system of communistic ownership they control its equitable division by means of their representatives, the mamaqs. Unquestionably it is this factor in the Minangkabau matrilineate which has insured its success and its permanency.<sup>19</sup>

*Criminal law.*—In Minangkabau there is a code of criminal law (adat siksa) but no civil law. The lack of a civil code must be attributed to the paternal power exerted by the mamaq. When a family member wishes to enter or leave his negari, or when he wishes to enter into a contract concerning his harto pantjarian, he must consult his mamaq. In cases of dispute concerning the fulfilment of contracts, the mamaq decides on the merits of the case, or the matter may be brought before a higher court, even to the negari chiefs. A family member who disobeys the orders of his mamaq can have his share of the harto pusako withheld: if he wishes to reobtain it, he must conciliate his chief and give a feast.

The criminal code has not progressed beyond the law of blood revenge and weregild.<sup>20</sup> In spite of Hindu and Mohammedan influence, the Minangkabau recognize no crimes against the state or a deity. This backward aspect of Minangkabau law is due to the fact that in the matrilineal regime the family is the state. Among the Batak with their better developed state government treason was formerly the gravest of crimes against the state.

Since in Minangkabau all crimes offend merely the avenger and his

<sup>19</sup> Willinck, 643; Collet, 443.

<sup>20</sup> The Dutch naturally have radically altered the native criminal code.

family, money compensation can atone for all misdeeds. However, the fine paid by the guilty party goes not only to the wronged person but also to the negari chief, who receives the compensation owing partly to the fact that he is head of the wronged individual, and partly to the fact that he is an expert in pronouncing judgment. The negari chief does not seek out the criminal, however, but waits until an accusation is brought before him.

In the case of murder no distinction is made between intentional and unintentional homicide. A distinction is made, however, between the worth of a panghulu and an ordinary man, an adult and a child, a man and a woman, in terms of weregild.<sup>21</sup>

In spite of the matrilineate a husband has the customary Indonesian right of killing a guilty pair if they are caught *flagrante delicto*, and a thief may also be killed if caught in the act.

Judgments are made in court on the basis of material evidence (tandos or tokens) and of the oath and ordeal. On the basis of tando djehe a case can be brought to court but no conviction obtained. With tando djemo (as footprints, or when the accused was seen near the place of crime), the accused must perform a purification oath. Convictions are obtained only by tando beti, such as a piece of cloth cut from the criminal, or evidence that the accused sold stolen goods under price.

Since a family is responsible for the crimes of its members, it, through necessity, has the power of evicting black sheep from its bonds (dibuwang hutang). Women, however, are treated as objects and not subjects of the law: they have no executive power and no right of entering into contracts, not even marriage contracts, therefore they are powerless to commit crime and cannot be cast out of the community.

Willinck sums up the Minangkabau law by stating that "there is here no real judge, no indictment, and no actual law case."<sup>22</sup>

*Kinship terminology.*<sup>23</sup>—Minangkabau kinship terms are divided into three groups: the cognate, the agnate, and terms of affinity. While the last two groups are fairly complete, only the cognate terms are supposed to express actual relationship. This fiction is supported by the local proverb that "a rooster can lay no eggs" and that children owe their existence entirely to the mother, by the fact that only the descendants in the female line live

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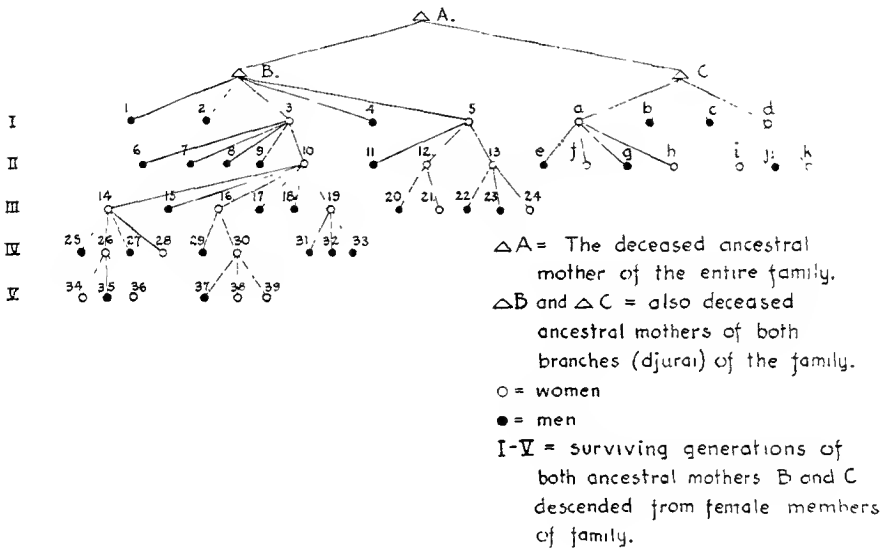
<sup>21</sup> In one case a man raped and murdered a young girl, but paid only one-third normal value. The victim was a woman and non-adult. The distinction between the sexes is due perhaps to ancient Mohammedan law.

<sup>22</sup> Willinck, 765, Kohler, 258-259

<sup>23</sup> Taken from Willinck, 359 ff.

together in the communal house, and by the denial of actual forms of marriage. Minangkabau society in these respects is quite similar to that of the Jowai branch of the Khasi.<sup>24</sup>

The cognate. The sa-buwah-parui is the unit within which the members claim blood relationship to one another. As indicated on the chart, this normally consists of five generations. Each portion (djurai) of the sa-buwah-parui has a family house of its own. *A*, *B*, and *C* were sisters. *A* was the ancestral mother of the entire sa-buwah-parui. The oldest djurai is *I-39*, the youngest *a-k*. The panghulu of the sa-buwah-parui is *I*. If *I* dies or is not elected, then *2* or *4* takes the office. The mamaq of djurai *a-k* is *b*.



#### The sa-buwah-parui

Mamaq, mother's brother. In the narrow sense of the word 25 and 27 are mamaq to the children of 26. In the broader sense of the word, all men of an older generation are called mamaq. The actual mother's brother may be called maq kandung (womb) by the nephews and nieces. If there are several brothers of the mother they may be distinguished by age, the eldest being called maq tuo, the youngest maq bongsu, the others maq tengah.

Anak buah. The subjects of the panghulu, members of the sa-buwah-parui.

Kamanakan, sister's children. In the broader sense, the subjects of a mamaq. The term is used also by an old man to a young man of the same negari.

Sudara. All the members of the same sa-buwah-parui are sudara to one another. They form as a whole a sa-par-indu-an, that is, they have a common tribal mother.

<sup>24</sup> Gurdon, 76.

They are to each other *sah-indu*, from one mother, or *sa-ninia* from one grandmother, etc.

*Ninia mujang*, great-great-grandmother. She is also called *pujang* or *muang*.

*Tjutju mujang*, great-great-grandchildren.

*Niniq*, great-grandmother; also all women of her generation. She is called also *ninia mujang* or *andueng*.

*Tjutju piui*, great-grandchildren of a *niniq* and the women of her generation.

*Tjutju tjikjik*, children of the fifth generation.

*Tjutju pindik*, children of all further generations.

*Tuo* or *gaik*, mother's mother; also all women of her generation. The actual grandmother may be called *tuo* or *gaik kandung*.

*Tjutju*, grandchildren of all women called *tuo*. Actual daughter's children may be called *tjutju kandung*.

*Mandeh*, *ibu* or *indu* (ref.), mother, her sisters, and all women of mother's *sa-buwah-parui* and generation. A child speaks to his real mother as *mandeh kandung*, and she calls her real children *anaq kandung*. A child can differentiate his mother's sister as *mandeh kètè* (little mother).

*Dei besar* (big) or *dei tuo*, oldest sister of mother. The sisters intermediate in age are *dei tengah*, and the youngest is *dei bongsu* or *dei hangsu*.

*Dansanak* (*dans-anak*), siblings. Members of the *sa-buwah-parui* of the same generation who are *sudara* to one another call each other *dansanak*, while actual siblings through the mother call each other *dansanak kandung*. If *dansanak kandung* have the same father, they call one another *dansanak salului* (beloved). Thus in the chart the members of the *sa-buwah-parui* of lines I, II, III, IV, and V are *dansanak* to each other. To designate mother's sister's children one says *badansanak mandeh*, *badansanak ibu*, or simply *biai*. The grandchildren of the grandmother's sister are *badansanak tuo* or *badansanak gaik*. Then in ascending generations we have *badansanak niniq*, *badansanak muang*, and *badansanak pujang*. Cousins still further removed are grouped together under the general term *badansanak djau* (far).

The Minangkabau have also a number of terms expressing the age status of brothers and sisters. Thus *ulo* and *ambo* are terms for an older brother, and *angah* or *katuwo* (*kakah tuo*) for an older sister. Younger brothers and sisters are called *adieq* or *adia*, and the youngest in the family is called *bongsu*.

The agnate. The father and the members of his *sa-buwah-parui* are not thought of as actual relatives of the children. Nevertheless there are terms to express the various degrees of relationship based on the usual generation system.

*Induq bako*. The *panghulu* of the mother's family is called thus by the father's family.

*Orang babako* or *orang baripo*. The father and the members of his *sa-buwah-parui* are called thus by the children and the members of their *sa-buwah-parui*.

*Anaq udjung amè* or *anaq pisang* (banana). The father and his family call the mother's children thus.

Bapo or babak (shortened to apo and pak). A child calls his father and father's brothers thus. In designating uncles the word *kètè* (little) is always added. Age differences are designated by the additions *tuo*, *tengah*, and *hangsu*. The actual father may be called *pak kandung*.

Mandeh, father's sister. Unlike mother's sister, the word *kètè* is never added

Pak tuo, pak gaik, or injia, father's father.

Tuo or gaik, father's mother.

Dansanak injia. The injia calls his grandchildren thus.

Pak niniq, great grandfather.

Relations by affinity. The man who marries into a *sa-buwah-parui* is called *orang samando* by his wife and her family. *Samando* comes from *sando* which means something given in pawn or lent. According to Minangkabau fiction the husband is merely borrowed for the purpose of sleeping with his wife.

Mantuwo or mintuwo, father-in-law or mother-in-law. Also the siblings of the parents-in-law. The son-in-law addresses his father-in-law as *angku*.

Binantu or minantu, children-in-law. Siblings of a binantu are called *dansanak binantu*. A mother-in-law addresses her son-in-law as *dawan*.

Ipa, brother-in-law of a man.

Bisan, sister-in-law of a man.

Pambajan. Men who married two sisters are *pambajan* to one another.

Tunadi, husband of a woman's older sister.

Kakah, wife of a woman's older brother.

Sumandan, remaining members of a husband's family to a woman.

Pasumadan, wife of mother's brother to nephews and nieces.

*Linguistic analysis of Indonesian kinship systems.*—To date there has been no analysis of Indonesian kinship terminologies other than that made by Kroeber for the Philippines.<sup>25</sup> Yet upon the basis of such an analysis must rest the answer to the question as to which is older in Indonesia, the sib or the bilateral family. If the sib is older, then certain terms found only in Lowie's<sup>26</sup> bifurcating merging system will be ancient and of true Indonesian stock. Thus in the bifurcating merging system one would expect at least an Indonesian word for mother's brother as distinct from father and father's brother, and a word for father's sister as distinct from mother and mother's sister. If, however, Morgan was right when he termed the Malayan system the generation type,<sup>27</sup> then father, father's brother, and mother's brother would all have the title of father, while mother, father's sister, and mother's sister would all be called mother. Likewise cousins would all be termed siblings.

<sup>25</sup> Kroeber, 1919a.

<sup>26</sup> Lowie, 1928.

<sup>27</sup> Morgan, 451. Morgan, having no actual examples of Indonesian kinship terminologies, took the Hawaiian as a standard.

Now we do find the generation or Polynesian type of kinship in localities which are removed from sib influence. Like the Polynesians the Filipino classify according to age status, merge collateral with direct lines of descent, and disregard root terms denoting the sexes, with the exception of the parents.<sup>28</sup> Kruijt has shown that the same type of system is used by the Toradja of Celebes.<sup>29</sup> Tama here means father's brother, mother's brother, and formerly meant father, although now the term papa is used. Ine or nene indicates aunt or mother and all women of the older generation. Tu'a is used for grandmother or grandfather, while makumpu means grandchild, grandnephew, or grandniece. The common word ana<sup>30</sup> means child, nephew, or niece. Older siblings and cousins are differentiated from younger by the terms tukaka and tua'i. Children of the same generation call one another mopotu, and, like the Filipino in former times,<sup>31</sup> are prohibited from marrying if they have the same father or mother, grandfather or grandmother.

This simple system of the Toradja not only follows the Polynesian pattern, but in fact the greater portion of the terms are of Polynesian root.<sup>32</sup> Thus ta is the root for male in Polynesian, and tama in Polynesian means father. Ine in Polynesian is root for woman, which becomes ine or ina in Malaysian. Tua or tu is the root for old in both languages, and bua indicates fruit in Polynesian and womb in Malaysian.

There is a residue, however, in Toradja as in all Malaysian kinship systems which is not of Polynesian origin. Thus the words tukaka and tua'i are foreign, kaka comes in fact from the Dravidian (Tamil) akka indicating older sibling, and a'i from the Dravidian tambi indicating younger sibling. These words, like other relationship terms which have been taken over from the Tamil into Indonesian, are found also in Sinhalese, but Hocart has pointed out that their original source was the Dravidian and not the Aryan language.<sup>33</sup>

Among all the Indonesian peoples with sibs, and among the sibless Mentawai, a special term for mother's brother is employed. If sibs were of great antiquity in Indonesia, one would expect to find this term of pure Indonesian origin. If the Polynesians originally had sibs, then the term might be of Polynesian origin. If, however, the sib system came as an in-

<sup>28</sup> Kroeber, 1919a, 81.

<sup>29</sup> Kruijt, 8.

<sup>30</sup> Final k or q may be omitted or indicated by a glottal stop in Indonesian. Thus, ana, anak; mama, mama' mamaq.

<sup>31</sup> Kroeber, 1919b, 147.

<sup>32</sup> Tregear may be used for Polynesian etymology.

<sup>33</sup> Hocart 1928, 189.

roduction from Dravidian India, then the term might well be Tamil. The latter is the case: thus, mother's brother: Tamil, *māmā*; Karo Batak, *mamak*; Minangkabau, *mamaq* or *mama'*.<sup>34</sup> Toba Batak *tulang* is not original; it corresponds to the Ifugao sibling term *tulang*.

As an additional proof that the Indonesian sibs are not indigenous, it may be pointed out that in general either there are no separate words in Indonesian to indicate cross-cousins and father's sister, or else these words are constructed from simpler Indonesian terms: thus, Minangkabau *mandeh* for both mother and father's sister and the Toba Batak *boru tulang* for mother's brother's daughter.

I arrive at the conclusion, therefore, that the sib system in Western Indonesia—and its accompanying complex of cross-cousin marriage, moieties, and totemism—came from the Dravidians of Southern India, and that the relationship terms needed to express concepts in a sib system were superimposed on a previous Polynesian simple generation system.

I will list now a comparative table of Malaysian kinship terms using such material as is available at present. The abbreviations and sources of information are as follows: Toradja, T; Dayaks, D; Filipino, P; Mentawai, M; Nias, N; Batak, B; Garo, G; Minangkabau, Mi; Tamil, Ta; Sinhalese, S.<sup>35</sup>

1. Grandparents, *tu'a* (T), *tato* or *buae* (male), *tambi* (female) (D), *apo* (P), *teteu* (M), *tua* (N), *ompu* (B), *ama* (G), *tuo* (Mi).
2. Grandchildren, *makumpu* (T), *aeso* (D), *apo* (P), *teteu* (M), — (N), *ompu* (B), *anaq* (G), *anaq* (Mi).
3. Father, *tama* (T), *amai* or *bapa* (D), *ama* (P), *ama* (M), *ama* (N), *ama* (B), *ama* (G), *bapo* (Mi).<sup>36</sup>
4. Mother, *ine* (T), *indu* (D), *ina* (P), *ina* (M), *ina* (N), *ina* (B), *ina* (G), *mandeh* (Mi).
5. Older sibling, *tukaka* (T), *aka* or *kaka* (D), *kaka* (P), *kebu* (M), *ga'a* (N), *haha* (B), *kaka* (G), *kaka* (Mi), *akka* (Ta), *akka* (S).
6. Younger sibling, *tua'i* (T), *ading* or *andi* (D), *ari* (P), *bagi* (M), *achi* (N), *anngi* (B), *anggi* (G), *adia* (Mi), *tambi* (Ta), *nangi* (S).
7. Sibling (opposite sex), — (T), *betau* (female), *njaha* (male) (B), — (P), *silat* (M), — (N), *iboto* (B), — (G), — (Mi).<sup>37</sup>

<sup>34</sup> The Dayaks call the uncle of someone else "mama," but their own "ama." (See Harde-land, "mama.")

<sup>35</sup> T (Kruijt), D (Harde-land), P (Kroeber, 1919a, 81—a reconstruction of ancient system), M (Loeb), N (Sundermann), B (this paper), G (Hurgronje), Mi (this paper), Ta and S (Hoc-art, 1928).

<sup>36</sup> The Sinhalese have the term *bappa* for father's younger brother, and *bapa* is given by Kroeber as common in the Philippines for the father and men of his generation.

<sup>37</sup> The Dayaks have a special word, *pahari* (root, *ari*), which means sibling of like sex, cousin, or anyone related. Marriage between *pahari* is forbidden.



- 8 Child, ana (T), anak (D), anak (P), toga (M), ono (N), anak (B), anaq (G), anaq (Mi).
9. Mother's brother, ka-mama-an (M), sibaja (baja, old) (N), mamak (B), ama (G), mamaq (Mi), mama (Ta), mama (S).
10. Parents-in-law, empo (D), tali-ku (M), matua (male) (N), tulang (male) (B) mantuwo (Mi), mentua (Malay).
11. Nephew or niece by sister, bua (M), bere (B), anak bua (Mi).
12. Sibling-in-law, iwan (female), agup (male) (D), biras (male) (Malay), eira (M), eda (female) (B), era (G), ipa (male), bisan (female) (Mi).

The following seem to be typical terms for Indonesian peoples: 1 tua, 2 anak, 3 ama, 4 ina, 5 kaka, 6 ari, 7 missing, 8 anak. For peoples with sibs: 9 mamak, 10 matua, 11 anak bua, 12 ira. The root ira might indicate that the custom of the levirate and sororate was older in Indonesia than the sib, as the word is neither Polynesian nor Dravidian. In Tagalog ang bilas means spouse's sibling's spouse.

*Kinship usage.*—According to Minangkabau adat neither a man gains possession of a woman by marriage nor a woman of a man. By the payment of a certain price the woman rents the services of her husband at night. The husband then can sleep with his wife in her biliks, the small sleeping room of the family house, or else with the men in the men's house. In the daytime he has access to his own family house but is not allowed to enter further than the tengah rumah, the long front room of the house in which the women ply their work when they are not out of doors.

The Minangkabau man has no rights over his wife other than to demand she remain faithful to him. He cannot ask her to make clothes for him, for that is the duty of his mother and sisters. If he obtains any food from her or her family, he is supposed to pay for it. It can even happen that a man and his wife never eat together. The woman, on the other hand, can always demand that her husband come to visit her from time to time and fulfill his marital function. If he wishes to be agreeable, he can aid her in the management of the household and the construction of the rice fields. He can also give her presents from time to time or even a fixed income for her maintenance. But this is all liberality on his part, for by the adat he is not compelled to any of these ministrations. In fact, if he is too liberal in sharing his harta pantjarian with his wife, he is liable to get into difficulties with his own family.<sup>35</sup>

Marriage is more brittle in Minangkabau than elsewhere in Indonesia, and as soon as the visits of a husband become few in number and the family

<sup>35</sup> Willinck, 520.

sees that he does not care for his wife any longer, the marriage is broken off. Then both sides remarry as soon as possible.

Married couples are *rakanan*, comrades, to one another. They are spoken of as *balaki babini*, man and wife, *duwo istri*, the married couple, and *barumah bakanti*, house companions. A married woman is called *padusi* or *paradusi*, a maid *anak gadis*, and a widow or divorced woman *orang rando* or *barando*. To her husband a married woman is the *istri* or the *bini*, the wife, while he is her *laki* or, to use the more dignified Hindu appellation, her *suami*. By courtesy the husband is also called the *djundjungang*, the support, by his wife. Whenever a wife speaks of her husband she calls him *ajah* or *bapa anak hamba*, the father of my children. When she speaks to him she calls him *ang*, older brother, or *paq*, if he has given her children. If he has not, she may call him *maq* (*mamaq*). She may also call him *tuan* or simply label him by his profession. Whatever she does, she must never mention his name in speaking to him or of him. In like manner, the man speaks of his wife as his *bini* and addresses her as *adieq*, little sister, thus comparing her to his younger sister.

It is interesting to note that *teknonymy* takes two forms in Minangkabau, each of which has as its object the avoidance of personal names. A man before he has children may be an uncle; in this case he would be called by his wife *mamaq si A*. If he has children then he is called *paq si A*. In the same manner the parents-in-law must refer to their son-in-law either in his capacity of uncle or father of so-and-so. However a mother-in-law can address her son-in-law as *dawan* and the son-in-law his father-in-law as *angku*.

Joking and avoidance customs as well as the laws of incest are not so rigorously enforced in Minangkabau as among the Batak. They are nevertheless of the same nature. A father may not caress his daughter, nor may brother and sister be demonstrative with one another. The law of the family covers the entire *suku*, and all *suku* acquaintances of opposite sexes must be very reserved. On the other hand, men and women of different *suku* may be very forward in their behavior, especially if they are not married. There is one striking point of difference between the Minangkabau and the Batak: In Minangkabau boys and girls before they become engaged can mingle freely, but once engaged they must rigorously avoid speaking or meeting each other;<sup>39</sup> among the Batak an engagement is merely one form of trial marriage.

Parents-in-law and children-in-law, regardless of sex, are forbidden to be familiar, cordial, or jest with one another. They are not allowed to sit on the same mat or bench or eat from the same board or banana leaf lest

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<sup>39</sup> In Lampong and Nias engaged people also avoid one another (Kleiweg de Zwaan, 526).

their fingers touch. In the same way siblings-in-law of opposite sex never joke, and avoid one another.

Theoretically the sa-buwah-parui of the husband and that of the wife are brought into no relationship with one another by a marriage between members. Actually, however, marriage has preserved its aspect of group exchange here as among the Batak. Thus, after the death of one's wife, it is deemed highly desirable to marry one of her sisters "so that the bond between the two families should not be broken." It also is considered desirable that a man marry the widow of his deceased brother for the same reason.

Cross-cousin marriage is not prescribed by the adat, and the kinship nomenclature does not reflect this form of union, yet it is nevertheless the custom for a family to pick out the son of the mother's brother (anak mamaq) or of the father's sister (kamanakan bapa) as the most suitable husband for the daughter. In this way the family believes itself assured of having a son-in-law of the same social standing as themselves.<sup>40</sup>

*Marriage restrictions.*—Marriage has been shown to be exogamous, and a woman must marry a man not only from a different sa-buwah-parui but also from a different suku. Incest is called sumbang and is punished by disowning.

In regard to other restrictions on marriage the Mohammedan law at the present time is followed more closely than the native adat. Thus, while a woman might marry a half-brother from a different father according to native adat, this is seldom done. While in some districts a man is prohibited taking more than one wife, in others certain of the wealthy marry four according to Mohammedan law, spending a month with each.

According to Mohammedan custom a man is not allowed to marry two sisters at the same time, a parent-in-law cannot marry a child-in-law, nor a brother-in-law a sister-in-law while the spouse is still living.

Formerly native adat forbade a virgin contracting a marriage with a man outside of her negari, and today this seldom is done. A woman who already has been married (orang rando) is allowed to marry a stranger.<sup>41</sup>

*Marriage.*—As among the Batak and other primitive peoples, bachelors or spinsters are almost unknown in Minangkabau.<sup>42</sup> There is no reason for a Minangkabau woman to remain unwed, for her family finds a husband for her while she is still a young girl; later when she becomes widowed or di-

<sup>40</sup> Willinck, 450; Eerde, 1901, 460, Kleiweg de Zwaan, 558.

<sup>41</sup> Willinck, 452; Smith, 195.

<sup>42</sup> According to Collet, 254, a spinster is called apa guna, "what is the use?"

forced she seeks her own mate. In a later marriage a woman must receive the consent of her *mamaq* in order that she may be assured that her spouse will be welcomed in the family house, but the man need consult no one.

Only the first marriage is deemed of social importance in Minangkabau. This is contracted without consulting either the boy or the girl by the two *djurai* concerned in the matter.<sup>43</sup> Boys are usually married off at about the age of 15, the time of their circumcision, and girls at the time of their first menstruation. In spite of the social importance attached to this early marriage, it seldom has any lasting effect, and a woman not infrequently has changed mates five or six times before she arrives at the age of twenty. If the Batak woman may be said to enjoy her freedom before marriage, then her Minangkabau sister has her opportunity in post-nuptial days.

After all the older brothers and sisters of a girl have been married off the family decides on a suitable husband for this daughter and employs go-betweens to sound out the feelings of the boy's family. If the consent of the latter family is obtained, the family of the girl sends small pledges (*tandos*) and receives *tandos* in return. The heads of the *sukus* are informed of the engagement, and it is made public. If the affair be broken off later, either before or after marriage, the *tandos* are returned. *Tandos* are exchanged at the time of any contract with the same purpose as at a betrothal. Naturally if one party breaks a contract, the other party can claim possession of both *tandos*, while if a contract is broken by mutual consent, *tandos* are returned.

Four or five days after the exchange of *tandos* the family of the girl again sends presents and receives chickens, earthenware, and cloth. This is called the release from the *selo* (*selo*, sitting with crossed legs). After this the two families can be more familiar with one another. If these presents were not given, the children born of the marriage could demand help later from the family of the husband.

Engagements usually last but a short time. They may, however, last a year or two if the engaged couple are too young to marry, when important preparations have to be made for the wedding, or when an additional wing has to be put on the family dwelling. If the engaged couple are children and the engagement is of some duration, they live alternately in one another's house although they are not allowed to come into contact. This is to maintain the bond between the two families.<sup>44</sup>

<sup>43</sup> According to Mohammedan law a father or male guardian marries off a virgin; in Minangkabau the *mamaq* has the most to say. In some regions the father also is consulted. (Juynboll, 210, gives the Mohammedan marriage law.)

<sup>44</sup> Willinck, 472, Erde, 1901, 402 ff.

The actual wedding ceremony is conducted with great festivities and feasting, especially if the bridal pair come from prominent families. In pre-Islamic times the *mamaq* of the woman and the *mamaq* of the man performed the final ceremony. Now it is usually the father of the woman who acts as her *wali* (guardian) and "gives her away." As in southern India and everywhere in Indonesia the central act of the wedding ceremony consists of the bride and bridegroom eating together. Contrary to Moham-medan law the greater part of the expense of the wedding is borne by the family of the bride. A symbolic offer of a bride-price in the form of a silver token is usually made in deference to the regulations of Islam, but actually it is the groom who is bought, or, according to Willinck's phraseology, "rented." This is done by means of the dowry, which amounts to from 25 to 60 guilders and which is brought from the house of the bride to that of the groom. This small amount is called *ame* and is given back at the time of a divorce.

Delayed consummation of the marriage occurs in the district of Agam, a custom which is also found in Java, Atjeh, and elsewhere in Indonesia. The bridegroom spends the night following the wedding with his wife in her *bilik* and there chats with her, but etiquette demands that a pair of the wife's elderly relatives also be present and that the newly-married couple enjoy no great amount of familiarity. The wife in fact acts quite coldly toward her husband for five or six nights after the wedding, and when the husband takes his departure in the mornings he has to do so without attracting the attention of the other occupants of the house.

A mock ceremony of bridegroom capture takes place the first morning in a manner somewhat similar to that of the matrilineal Garo of Assam.<sup>45</sup> After the husband has chatted with his bride all night he goes secretly to his own home in the morning. But a deputation of young men are sent by the family of the bride to round him up, and they bring him back by pretended force to the home of his bride. This ceremony is held in imitation of the actions of a bull, who not being used to a strange stall runs away and has to be led back. Among the patrilineal Batak the bride has to be led weeping to the home of her husband; here among the matrilineal Minangkabau it is the husband who has to be led protesting to the home of his bride.<sup>46</sup>

Among the Batak if a family is in danger of dying out a man is married into the family so that there may be male children to inherit the property.

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<sup>45</sup> Playfair, 67.

<sup>46</sup> Willinck, 475, 520-525.

In Minangkabau the situation naturally is reversed, and when a family is in danger of dying out, a woman from the same negari if possible is adopted so that her children may inherit.<sup>47</sup>

*Divorce.*—The dissolution of a marriage while both parties are alive is called batjarei hiduiq (to separate alive), while dissolution through death is called batjarei tambilan (separation by means of a spade).

At present, in portions of Minangkabau least influenced by Moham-medanism, divorce is conducted without any formality; formerly this was so in all of Minangkabau. A man simply packs up his things and leaves. He tells the motive to his family and his acquaintances while the woman or her mother tell it to the mamaq. The panghulu has nothing to do with the divorce. If a woman wishes to get rid of a man and has no grounds for divorce, she simply furnishes notice by changing her sleeping quarters. The man takes the hint and ceases coming to the house.<sup>48</sup>

*Childbirth.*—During the birth of a child the husband must not be present in the house. The husband and the midwife are supposed to be ashamed of one another, and therefore practice avoidance. The afterbirth is placed in a purse woven from banana leaves and is buried under a certain pillar of the house.

Three days after the birth of the child the mother gets up to perform light housework. If she is very weak, however, she is allowed to remain in bed fifteen days. During this time she is not allowed to eat red peppers, root vegetables, sweets, or condiments with her rice. She lives on dried fish, salted dried rice, and dried meat. The foods tabooed are supposed to heat the blood; sweets cause pain. No restrictions are placed on the father.

*Treatment of children.*—The children are not brought up by any particular member of the djurai but by the female relatives as a group, all of whom have the right of correction and all of whom join together in deciding on the child's career and marriage. The oldest woman of the djurai has the most to say in these matters, together with her male representative, the mamaq. The father displays not the least concern regarding his own children, although he gives them small presents from time to time. In the better families unmarried girls are carefully guarded.

*Puberty ceremonies.*—Boys are circumcised and girls incised. Boys have a lock of their hair preserved to be ceremonially cut off at puberty, while

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<sup>47</sup> Kohler, 252; Willinck, 356.

<sup>48</sup> Maass, 434.

girls have their teeth filed before marriage and their ears bored while they are very young.

Both boys and girls are bathed in the river a few days after birth and are named at this time by the Mohammedan priest (malim).

Girls arrive at puberty at about the age of twelve or thirteen. No ceremony takes place at this time, but from now on they are carefully watched and no longer allowed to play with the boys. During periods of menstruation (bulan, moon) the women avoid the use of oil in their hair, keep away from men, and bathe twice a day in the river.

Boys become of age at fifteen, at which time they are entitled to manage their business affairs and hold office.<sup>49</sup>

*Names.*—Children receive their names at the time they are first bathed in the river, at the latest five days after their birth. While the names are actually bestowed by the malim, the parents offer a number of names as choice. This first name is called a "little name" (nama kětěk). Later when the boys and girls marry they receive their inherited titles, or little titles (galar kětěk), and these satisfy their vanity. Upon the assumption of titles the childhood names are lost. The only real titles are those of the panghulus (gala panghulu). Names and titles are of Hindu origin, and their meanings are not understood by the present-day people.

With the assumption of the family title goes the right of part ownership in the family property, such as rice fields. It is therefore just as great an offense to steal a family title as it is to steal the family property. Slaves had no rights to family titles but kept their childhood names.

The Minangkabau like the Batak are loath to reveal their names, and it is an insult to ask for the names of elder members of a family. Teknonymy, as before mentioned, is practiced, and a man names himself after his nephews or children, a woman after her children or grandchildren.<sup>50</sup>

*Division of labor.*—The wet and dry rice fields are worked together by the men and women. When cattle are scarce or not to be had the woman has to work the fields by hand. The man has to lay fences around the field, do the house building and keep it in repair, plant his tobacco, make his fishing utensils and boats, do most of the fishing and all of the hunting, gather wood and brush products in the jungle, and sew the clothing. The woman plants the sugar cane, works on the house garden, and catches crabs and fish in the swamps. She does all of the house work, takes care of the children, cooks, grinds rice, weaves, spins, and prepares the palm leaves

<sup>49</sup> Maass, 448, 452, Willinck, 542.

<sup>50</sup> Maass, 443, Willinck, 180-182.

for the roofing. The work of women is so severe that old women are a rarity, and most women at fifty are already bent, decrepit, and dependent.

The chief who is paid by the government no longer works in the field, and still less the panghulus, where native adat is in force. Those who have a smattering of Mohammedan letters also deem themselves too important to work in the swampy sawahs. Preceded by their mothers and their sisters, who carry the heavy loads on their heads, they wander marketward in ornamented clothing and carry nothing more than bird cages with their favorite doves carefully protected from the heat of the sun by coverings of colored cotton cloths.

In spite of the nominal "matriarchate" Van Hasselt claims that the women really are the servants of the men. They not only prepare the meals of the men in their family, but they also serve them first, later eating with the children.<sup>51</sup>

*The patrilineate and the matrilineate.*—A study of two neighboring but opposite systems of government and property ownership in Sumatra furnishes convincing proof that both the patrilineate and the matrilineate have developed from a common form of bilateral family and that in neither case has the system attained full development. Government among the Batak is entirely in the hands of the men, and yet the voice of a woman is sometimes heard in the council house. Women exert great influence on governmental decisions in Minangkabau, but a woman never can be either mamaq or panghulu. Among the Batak, women own no property, and they themselves are said to be property, although they can be neither sold nor abused. The Minangkabau women nominally own all the inherited property, but actual title to the property is in the hands of the men; the women have not the legal right to make a contract, not even to dispose of themselves in marriage. Among the Batak a woman is sold as a commodity into marriage, while in Minangkabau a fine pretense is made of hiring the husband by the family of the woman, yet both cases yield on analysis to a substratum of wife exchange where a woman from one family, sib, or moiety is traded for a woman of the other. Logically the Batak woman should be chaste when sold into marriage, while her Minangkabau sister should merely hire a husband after a long and eventful spinsterhood, yet the very reverse of this situation is the case. Presumably both peoples at one time practiced the common Indonesian custom of prenuptial sexual laxity. Of actual enslavement of one sex by the other, either among the Batak or the Minangkabau, there is not a trace. The division of labor is

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<sup>51</sup> Van Hasselt, 253, Maass, 434.



similar everywhere in Sumatra to that of Borneo or the Philippines.

Evidently there has been some force which has created the two opposing régimes in Sumatra; yet this force or influence cannot be sought either in sociological necessity, in the functioning of local customs, or in some accidental or deeply inrooted historical principle such as the levirate and sororate, the division of labor between the sexes, or patrilocal versus matrilineal residence. Rather we must turn our attention to what seems to be an absolute proof of the diffusion of sociological customs—cross-cousin marriage, matrilineal and patrilineal sibs, moieties, exogamy and totemism—from southern India through Indonesia, New Guinea, and Australia, into Melanesia and with a final dash of survivals in far off Polynesia.

#### GENERAL CONCLUSIONS

In adding Indonesia to the region of Oceania in which a specific type of kinship organization is to be found, the present author is but adding the expected to the known. Thus Kroeber in 1923 suggested that there might be a single point of origin to the kinship systems of Australia, New Guinea, and Melanesia.<sup>52</sup> Hocart in 1925 became convinced that the symmetrical cross-cousin marriage of the Tamils of southern India not only was carried to the Veddas of Ceylon through the Sinhalese—among these three people kinship terminology remained the same—but that it also penetrated to Fiji.<sup>53</sup> Radcliffe-Brown in 1927 spoke of the Dravidian-Australian kinship system, which in its simplest form consists of cross-cousin marriage, and which he believed penetrated as far as Fiji.<sup>54</sup>

In now seeking to place Indonesia in its proper position, since it naturally must fall into line between southern India and New Guinea in any discussion of trans-Pacific waves of diffusion, I will briefly sum up our knowledge of Oceanic kinship organization.

Briffault has collected data on cross-cousin marriage in India and has concluded that marriage with the mother's brother's daughter is the fundamental social law with a large proportion of the aboriginal races of India, being observed by all the Dravidians of southern India, by most of central India, and extending as far north as Mirzapur.<sup>55</sup>

A more searching examination, however, reveals the fact that symmetrical cross-cousin marriage is probably the original form in India, as it is

<sup>52</sup> Kroeber, 1923, 234.

<sup>53</sup> Hocart, 1925, 61.

<sup>54</sup> Radcliffe-Brown, 1927, 344.

<sup>55</sup> Briffault 567.

today among the Gond and Tamil, although this form shows a strong tendency to break down, as among the Vedda, into marriage with the mother's brother's daughter. This alteration probably is due to the influential position held by the "male mother" (the mother's brother).

The Gond of Central India may be chosen as a typical example of the "Dravidian-Australian" kinship system. Among the Maria Gond of Bastar there are two main divisions of the tribe, A and B. These divisions again are divided into totemic patrilineal sibs, 90 in A and 69 in B. Marriage is exogamous to the moieties and therefore to the sibs. Thus all the sibs of A say that they are either Bhaiband or Dadabhai to one another, the first term indicating brothers, and the second parallel cousins, the sons of brothers. However, all the sibs of A stand in the relation of mamabhai or ako mama to those of B. Mamabhai translated is mother's brother's son and akomama indicates that the two sibs had the same maternal grandfather. Thus here, as among the Batak, cross-cousin marriage is the proper form (among the Gond the cousin marriage is still symmetrical), but the women of the correct age class and sibs have all assumed the name of cross-cousins and all are possible mates. Again, as among the Batak, refusal to marry a proper cross-cousin meets social disapproval.

Formerly a marriage between a brother's daughter and his sister's son was the most common. A man still thinks that he has a right to his sister's daughter for his son on the ground that his family has given a girl to her husband's family and that therefore they should give one back. If the girl marries anyone else the maternal uncle demands compensation. Compensation is also demanded if a brother refuses to give his daughter to his sister's son.<sup>56</sup>

In spite of the fact that the marriage system of New Guinea appears to rest upon the exchange of wives between moieties<sup>57</sup> rather than upon the exchange of cross-cousins, Wirz has demonstrated that the social-religious organization of southern Dutch New Guinea is strikingly similar to that of Australia. The Dema, the ancestral spirits of the Marind-anim, correspond to the Alcheringa of Australia. While they were on earth in half animal, half human form, they founded the present moiety and patrilineal totemic sib organization. Dances, magic rites, and head-hunting were inaugurated by the Dema, whom masked dancers impersonate and whose voices are heard in the bullroarers and flutes. Totemism is explained by

<sup>56</sup> Russell, 65.

<sup>57</sup> Buschan, 90, writes that patrilineal totemic sibs are to be found in the region of Torres straits and in Humboldt bay to the north; elsewhere matrilineal moieties are common. Williams, 101, describes patrilineal totemic sibs for British New Guinea. Thurnwald, 16, emphasizes exchange marriage between moieties among the Banaro of German New Guinea.

the fact that all people, animals, plants, and other objects came from the same creating Dema and therefore are blood relatives. Similar to the belief of eastern Indonesia, Heaven and Earth in the beginning were Dema, male and female. From these two descended Dema Geg and Dema Sami who founded the moieties.<sup>58</sup> Thus New Guinea evidently received its social organization from eastern Indonesia and passed it on in turn to Australia.

In Australia Radcliffe-Brown regards his type 1 system as being fundamental. This involves symmetrical cross-cousin marriage and a dual organization system, either matrilineal or patrilineal. The dual organization may be subdivided into four parts or the divisions may have no name at all.<sup>59</sup>

In Melanesia the people at the further corners of the region, those bordering on New Guinea, the natives of New Caledonia, and the seacoast Fijians have typical forms of cross-cousin marriage.

Thus Malinowski has described the asymmetrical cross-cousin marriage of the Trobriand islands, where the most suitable match and one which is arranged while the parties betrothed are in infancy, is between a man's son and the daughter of his sister. The Trobriand islanders have matrilineal totem clans and while the father's sister's daughter makes the best match, the father's sister and all women of the father's clan are called "taboo" and may be married. Marriage with the mother's brother's daughter is rare.<sup>60</sup> Cross-cousin marriage also is reported among the Wagawaga of southeast British New Guinea and in Tabetube, an island to the southeast of New Guinea.<sup>61</sup>

New Caledonia has patrilineal totemic sibs and a system of exchange cross-cousin marriage arranged at the time of early childhood. A boy marries his mother's brother's daughter and his sister marries her father's sister's son. Cross-cousins are called boru, the Indonesian word for girl, while younger brothers and sisters are called padi, a word which corresponds to Dravidian angi. Similarly to Indonesia, pledges are exchanged by families making a contract, including the betrothal contract.

As among the Batak the mother's sib (as well as the father's) is taken into account, and we thus have matrilineal and patrilineal reckoning. The matrilineal sib, however, is not so important as the patrilineal. Marriage consists of a continual exchange of mates between the father's sib and the mother's; for every girl taken from the mother's sib an equivalent must

<sup>58</sup> P. Wirz, book 1, pt. 2.

<sup>59</sup> Radcliffe-Brown, 1927, 343

<sup>60</sup> Malinowski, 95.

<sup>61</sup> Hocart 1925 65.

be furnished from the father's. Once this system breaks down the pledges are forfeited and we have marriage by purchase.<sup>62</sup>

Symmetrical cross-cousin marriage occurs in Fiji as an intrusion of relatively late origin. This is shown by the fact that it is far more habitual among the advanced coastal peoples than among those of the interior, if it exists at all among the latter.<sup>63</sup> The system has been recorded in Vanua Levu and the Koro sea tribes of Viti Levu.<sup>64</sup> While moieties are absent in sibless Fiji proper, the most prominent characteristic of the neighboring Lau islands is the dual division of all political grouping.<sup>65</sup> In Viti Levu totemism exists, although it has no significance as a marriage regulator and the totems are inherited in the male line.<sup>66</sup> According to the Mbau system of kinship terminology, as recorded by Basil Thomson, the names of both elder and younger siblings or parallel cousins are of Dravidian origin, being *tuaka* and *tathi*. The "male mother," that is, maternal uncle and father-in-law, is *ngand-ina*.<sup>67</sup>

The entire social organization of the more central portions of Melanesia is as yet but imperfectly known. In the Banks islands and the northern New Hebrides the people are divided into matrilineal moieties (*veve*), but in the Solomon islands there are multiple sibs. In Florida, Solomon islands, there are six totemic sibs. Each sib is named after its totem which cannot be eaten by the sib members, as it is thought to be an ancestor. Totemism is also the essential feature of the Santa Cruz islands.<sup>68</sup> It appears evident that while sib or moiety organization, often associated with totemism, has persisted, cross-cousin marriage is rare and exchange marriage still rarer. Therefore the discovery of Thurnwald that in the district of Buin, Bougainville, siblings exchange wives and that the kinship system is of the cross-cousin type is quite significant. Likewise the Ambrym system with its four divisions and marriage between second cross-cousins is similar to Radcliffe-Brown's Australian 11. Actual cross-cousin marriage is found in Tanna and Aniwa of the southern New Hebrides and in Guadalcanar of the Solomon islands.<sup>69</sup>

From this general survey it appears therefore that the Polynesian

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<sup>62</sup> Leenhardt, 49-57.

<sup>63</sup> Rivers, 11, 123.

<sup>64</sup> Radcliffe-Brown, 1927, 344.

<sup>65</sup> Hocart, 1929, 232.

<sup>66</sup> Rivers, 11, 349.

<sup>67</sup> Thomson, 185.

<sup>68</sup> Codrington, 24; Rivers, 11, 349.

<sup>69</sup> Hocart, 1925, 61; Rivers, 11, 123; Radcliffe-Brown, 1927, 345

generation type of kinship is the oldest form in the Pacific, that it underlies the merging bifurcating system imported from India along with sib systems and cross-cousin marriage, and that wherever we find this archaic system we at once know that we may find the bilateral family. Furthermore, there appears to be a correlation between the presence of the original bilateral family and the absence or weakness of certain forms of ceremonial behaviorism, especially joking and avoidance relationships. While I was in the Mentawai islands I noted that there were no avoidances, not even between brother and sister or mother-in-law and son-in-law. The same rule holds true for Borneo and Celebes, the Philippines (with the exception of brother and sister avoidance), Polynesia as a whole, and even the Andaman islands.<sup>70</sup> It thus appears that avoidance relations are not inherent to the human race but form part of the cross-cousin marriage and sib complex.

As is only natural, rudiments of sib organization, although in a survivalistic or functionless form, have penetrated from Melanesia into Polynesia. Thus in Tonga the nobles have aped the manners of the Fijians and marriage with them of the cross-cousin type is considered a matter of duty. Among this class, a girl is supposed to marry her father's sister's son.<sup>71</sup> The semitotemism of Samoa is likewise well known; a person will not eat an animal which he regards as the reincarnation of his particular god.<sup>72</sup> Finally there are traces of dual organization in Polynesia: two great political divisions anciently were recognized on Hiva Oa, in the Marquesas, and there was a corresponding dual political division on Hawaii, Niue, Rarotonga, and Easter island.<sup>73</sup>

A final question, and one which is easier to raise than to answer, pertains to regions other than Oceania which have cross-cousin marriage and the totemic sib organization. Should the social organizations of Africa and America be regarded as independent inventions? A discussion of this question lies outside the scope of this paper,<sup>74</sup> and I will but briefly indicate possible routes of diffusion.<sup>75</sup>

<sup>70</sup> Radcliffe-Brown, 1922, 81. Here, however, the parents of man and wife avoid one another. However the Andaman islanders have been subjected to a certain amount of Dravidian influence, as is shown by the occurrence of the terms *mama* (uncle), *aka*, *bua*, etc. in their kinship systems. The systems are of the generation type.

<sup>71</sup> Gifford, 190.

<sup>72</sup> Turner, 17.

<sup>73</sup> Handy, 25.

<sup>74</sup> Kroeber, 1923, seems not averse to admitting the possibility of diffusion of sib organization to Africa. He naturally, however, regards America as a very much more highly involved problem.

<sup>75</sup> A summary of the occurrences of cross-cousin marriage in northern Asia, Africa, and America is given in Briffault, 569 ff.

If the Dravidian system of India penetrated to East Africa it would have done so through the Indonesians of Madagascar. It therefore is important that among the Hova the children of two brothers or brother and sister were expected to marry while the children of two sisters were absolutely forbidden marriage.<sup>76</sup>

The sib system and the cross-cousin marriages of the Northwest Coast of North America often have been thought to be Asiatic in origin. Briffault reports cross-cousin marriage for a number of tribes of Northeastern Asia, including the Ainu, the Chukchi, the Koryak, and the Gilyak. Even more significant is his reference to the fact that the Aleut marry by preference the daughter of their uncle.

Yet sib organization in both North and South America appears mainly to have originated in the Central American or Peruvian regions of higher culture and to have spread north and south avoiding only the more isolated peoples.<sup>77</sup> Hence to bring Asiatic social organization into America, one would have to postulate trans-Pacific diffusion. Americanists as yet are unable to prove this assumption.

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<sup>76</sup> Linton, 379.

<sup>77</sup> Kroeber, 1923, 355.

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VIENNA, AUSTRIA

## CULTURE CHANGES IN YUCATAN<sup>1</sup>

By ROBERT REDFIELD

### I

IN STUDYING any culture known to be derived historically from two markedly different sources—as for example any of the cultures of the present Indian-Spanish populations of Mexico and Central America—one's interest is inevitably engaged in an attempt to analyze the culture into its two principal historical components. The investigator seeks to assign each element of present-day custom to a Spanish or to an Indian origin. This familiar problem has attracted Dr. Asael Hansen, Mrs. Hansen, Mr. Alfonso Villa, Mrs. Redfield and myself in the course of ethnological work which we are now carrying on among the Maya of Yucatan on behalf of Carnegie Institution of Washington. Of course it turns out that some elements of the contemporary Yucatecan culture are easily to be identified with Spanish or with Indian influence, while others are refractory to this historical analysis.

Where elements of culture are definitely known from Europe, and where they are also not characteristic of American Indian cultures, they are without difficulty regarded as importations from Spain. In Yucatan such elements, to mention only examples, are oranges, ordinary domestic fowl, cattle, rice, saffron and other Old World condiments, trousers, the seven-day week, the novena, crossing one's self, the idea of incubus and succubus, and possibly also the ghoul and the witch's familiar, the notion of the evil eye, purgatory and probably judgment of the soul after death. Other traits are not known to characterize sixteenth century Europe, and are either actually reported for the ancient Maya by the first white invaders or else are known to be characteristic of other American Indian cultures. In Yucatan such elements, which must of course be regarded as indigenous and pre-Columbian, are most of the agricultural techniques centering about maize; the firedrill; the loincloth and the sandal; the hammock (although its use may not have become general in Yucatan until after the Conquest); the notion that eclipses are caused by an animal that is devouring the sun or the moon, and that should the luminary fail to reappear the household furnishings would revolt against their masters and devour them; the idea of four cardinal directions associated with rain-, sky-, and maize-deities and with

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colors; multiple rain-gods, associated with clouds, the east, lightning and thunder, the cenotes, gourd-rattles and calabashes, and objects of special cult involving ritual breads and oriented altars; the ritual breads themselves, made of maize and squash seed and baked in an earth oven; bee-deities, the objects of a special cult; deer-gods (who bear almost the same name as the patrons of hunters mentioned by Landa); bark-beer as a ceremonial drink; offerings of turkeys, ritually killed, especially as offered at regular four-year intervals; and divination by casting grains of corn.

Other elements, as for example many techniques of house-construction, are equally safely, though more circumstantially, assigned to an Indian origin. These elements are not affirmatively recorded for the ancient Maya; but they are harmonious with Indian cultures, and are difficult to imagine in a European setting. Such a trait is the ceremony whereby at an age of three or four months certain objects connected with the future activities of the child are placed in the child's hand and it is for the first time set astride the hip. A ritual not very different is reported for the ancient Aztecs.

Other traits, however, do not readily yield to this sorting-process into one of two pigeon-holes. Many elements in the culture of present-day Yucatan have both ancient Indian and European parallels, and could be attributed to either source, or to both. Shall we say that the custom of making religious pilgrimages to distant shrines is an Indian or a European custom in Yucatan today, when the historians tell us that both Indians and Europeans have long made such pilgrimages? Are the patron *santos* of present-day Maya villages the descendants of the local saints of the Mediterranean World, or are they translations of pagan patron gods? We can probably say that they are both, but that is about all we can say, lacking information as to just what was in the minds of the sixteenth-century Maya before and during the period of Catholization. The number thirteen which plays an important part in the present-day Maya rituals, is almost surely derived from indigenous culture, just as three and seven, which go together in the Catholic prayer context, are probably European. But what of nine, which now is a magical and sacred number in a wide variety of ritual contexts? We can only point out that the ancient Maya had nine gods of the underworld as they had thirteen sky-gods, and also that the Catholic novena was introduced by the missionaries and is still generally practiced.

I have been interested in the first-fruit ceremony performed throughout Yucatan when the maize is ripe. In the remoter villages this ceremony involves the offering in the cornfield of thirteen ears of maize to pagan gods, while Maya prayers are recited by a shaman-priest. But as the observer moves nearer and nearer the city, this ceremony, takes on, little by little.

more and more of the elements of a medieval harvest-home until at last it does not look at all Indian; the account of it reads like a page from Chamber's Book of Days. At what point does this ceremony cease to be Indian in origin and become Spanish?

Or consider the custom of bleeding for illness. This treatment, accompanied by cupping, is performed in Yucatan much as an old-time European barber would do it; and no doubt the Spanish conquerors were familiar with it. But the shaman-priest who bleeds his patients in the villages often uses a rattlesnake's fang as his instrument, and when he prescribes blood-letting to his patient because the sick man's ailment has been caused by his failure to offer the maize-gods the ritual they expect, it begins to suggest the penance by bloodshed of the ancient Maya.

With respect to the historical origins of some of the most fundamental complexes of contemporary Maya practice and belief, I find myself unable to make any statement. Among such I may mention the basic twofold category of "hot" and "cold" into which are divided foods, medicines, lands and people; the ceremonial planting of a ceiba pole to which the bulls are tied in the festal bull-fight; the dance with a decorated pig's head and a decorated pole; and the far-reaching and important concept of evil winds, named, specialized and semi-personified, that are thought to cause most illnesses. Many of these special problems are, however, capable of solution. One needs a familiarity with Spanish folk cultures, and a thorough study of early sources on Maya culture at the time of the Conquest.

The student experienced in Indian but not in European cultures tends to attribute to Indian origins elements of culture that are actually at least in part Spanish. Sometimes the reasons are apparently very good. The Maya today predict the weather for the coming year by observing the weather on each of the first twelve days of January, then check this observation by reading the next twelve days as corresponding to the months in reverse order, and further check it by dividing the last six days into halves, and the last day into hours. This custom—first reported, I believe, by Starr—has been regarded by writers on the Maya as aboriginal, probably because it was known only from the Maya area, and because Landa says the priests, in the second month of the Maya year, opened their books and read the prognostications of that year. But the identical custom, under a Spanish name, has turned up in regions far from Maya influence, and where Indian influence of any sort is small or non-existent—in Santo Domingo, in Venezuela, and in Costa Rica. So the likelihood that the custom is native to the Maya is much reduced. In historical inquiries of this sort often a very small change in facts will bring about a diametric reversal of conclusion.

These remarks will serve to suggest some of the reasons why those of us who are studying the contemporary Maya of Yucatan are disposed to turn from this problem of historical analysis to a problem of another sort, which I will soon state. In the first place these historical problems, as has just been indicated, are incapable of solution from a consideration of the contemporary Maya culture alone, but wait upon study of sources as to the pre-Columbian Maya, and upon knowledge of Indian and of European folk cultures. In the second place, some cannot be solved at all; or rather, the question, Indian or Spanish? cannot be asked in these cases; for some customs are probably both Indian and Spanish. In fact, some are probably neither Indian nor Spanish, in the sense that neither sixteenth-century culture exhibited the custom now characterizing the present-day peoples. Thus there is today an important belief, many years ago described by Brinton, in the supernatural character of the clay images, incense-burners and other pottery artifacts made by the ancients and encountered by the present-day people. These beings, the *alux*, are regarded as mischievous spirits, and are propitiated in certain ceremonies. Although it is conceivable that European ideas of fairies and goblins have influenced the development of this complex of ideas and practices, it is also quite possible that this is a parallel development, or degeneration, of god to goblin, that has taken place in Yucatan with the systematic destruction of the pagan religion by the priests.

Indeed, ultimately no Yucatecan culture element, whether originating in Europe or in America, turns out to be the same today as it was in 1519. We may say that the rain-gods, bearing the same name (*chaacs*) and many of the same attributes, are the same rain-gods of the ancients. But today they are captained by Saint Michael, they ride on horseback, and so riding are plainly confused with the horsemen of the apocalypse. We may observe the shaman-priest, sacrificing a turkey which is held by wings and feet by four men designated so to act, under the name, "*Chacs*," and recall how closely this picture conforms with Landa's account of the mode of human sacrifice performed by the Mayas of his time. But we cannot say that the connotations of meaning of the present-day act correspond at all closely with what went on in the minds of the actors in the ancient drama.

The present-day culture is a closely integrated body of elements derived from Spanish and from Indian sources, and all entirely re-made and re-defined in terms of one another. Nothing is entirely Indian, nothing is entirely Spanish. The ritual offering to the rain- and maize-gods incorporates the forms of a Catholic communion, but the chalice is a calabash and the sacramental wine is the bark-beer of the ancients. The books of Chilam

Balam tell us that anciently there was an important cult centering around the *Plumeria* flower (nicte), but today that flower, instead of being used in the rituals predominately pagan, as we might expect, is the appropriate adornment of Catholic altars and the suitable offering to the saints.

And in the third place—to return to the considerations which check the historical analyst—these problems, even if solved, do not easily lead into larger problems. If we are to distinguish science from history in that the former seeks always to reduce phenomena to general categories of wider and wider scope, then these problems do not readily lend themselves to science. We may be able to assign the day-count which I just cited to the Spanish heritage, but having done so we are not in a position to compare this fact with another like it and erect a generalization on that base. Facts of this sort tend to remain discrete and non-comparable; the scholarly effort comes to rest when the assignment to the one heritage or the other has been made. To use these facts in making generalizations we would have to know a great deal, probably more than we can ever know, as to what—for example—happened when the weather-prognostication custom was imported to the ancient Mayas, and as to what their culture at the time was like.

## II

The type of historical analysis which I have just been illustrating, if it can be taken as the sum of its details, amounts to a study of an instance of acculturation: the cross-modification and fusion of Indian and Spanish cultures. But as such it is a study of a series of events four hundred years after their occurrence, of events that took place in a period forever beyond direct observation and poorly documented by historians. The ancient Maya culture is known only very sketchily; the recovery of sixteenth- and seventeenth-century Spanish culture is a special problem; and just what took place when the two met is to be known only in so far as written records, as yet not collected, reveal it to us, or as a series of dubious historical inferences from consideration of the culture of the present time.

In view of these difficulties it is natural that an interest in culture changes should find lodgment, in Yucatan, in changes nearer at hand and more subject to direct observation. My associates and I have found such a problem in the study of the changes taking place in the Yucatecan folk culture—this integrated and unified mode of life which has been made of both Indian and Spanish elements and which characterizes the hinterland villages of the peninsula of Yucatan today. Beginning with this culture as a point of departure, we find it unnecessary to commit ourselves to assertions as to the precise ways in which Spanish and Indian elements contributed

to make it up; our concern is with what has recently taken place in this culture and is currently taking place in it under influences exerted by increasing mobility and communication. The culture changes of the peninsula have, of course, always taken place as a result of contact and communication, but thus broadly stated they are not changes that ceased when the Spanish influences diminished, or that were most marked in the sixteenth century; on the contrary they become increasingly effective with the spread of what we call "civilization"—that is, schools, roads and economic exploitation. These changes are happening under one's eyes.

The procedure which we have adopted to study these changes is the simultaneous comparative observation of several Yucatecan communities that have been affected by modern influences in varying degrees. We have selected three or four communities and ranged them in the order represented by the degrees to which these modern influences have impinged upon them. This we are able to do with assurance, because of the simplicity of the situation in the peninsula with reference to contact and communication. The peninsula is a single geographic region: a forested limestone plain. The rainfall increases as one goes southeastward until it is so great that human habitation is difficult. Merida, the capital city, is located in the northwest corner of the peninsula. This is the center of contact and of influences political, social, and cultural. From this point the roads and railroads move outward, becoming, in the southeast, trails through the bush. These trails, as one continues to move southeastward, become less frequent and less travelled, until one reaches the isolation of central Quintana Roo, where the Indians are visited only by the *chiclero* and the occasional travelling merchant.

We have begun studies in three communities. Mentioned in this same order of increasing remoteness, these are: first, the city of Merida itself; second, a community on the southeasternmost branch of the railroad, and third, a village some thirty miles in the bush to the south of the second community. This last community, which I shall speak of as "the village," is inhabited by persons of nearly pure Maya blood and with Maya surnames, there has been a school in the community for a dozen years; it is not yet, but is likely soon to be, in communication by wagon-road with the rest of Yucatan. The second community, which I shall refer to as "the town," includes many persons with much white blood; about half the inhabitants bear Spanish surnames, and speak Spanish along with Maya; the community has had a school for many generations; and it is the seat of a central municipal government, a judicial district, a federal school district, and a newspaper correspondent. We hope also to add a fourth, and most isolated

community: a village of the still tribally organized Indians of Quintana Roo. Mr. Villa has made four or five trips among these villages, but the work done there is still insufficient to permit me to include this fourth type of community in the summary comparison which I am about to make.

This comparison is underlain by a fundamental assumption: that by means of it we shall be able to outline a process of culture change, that we shall be able to indicate what is taking place in the folk culture under influences from the city and from the world outside of Yucatan. It will readily occur to one that this problem could be studied in at least two other ways. One might select a single community and observe what happened to it over a period of time during which it was exposed to these influences. But obviously this procedure would require a number of years. Or one might again take a single community and make two (or more) studies of its culture: one, of its contemporary mode of life, and another, of its mode of life a generation or two ago, as reported to the investigator from the memory of the older inhabitants. These two cultures could then be compared. We have in fact made some use of this latter procedure. For reasons which I shall try to make apparent it is not necessary for us to assume that the life of the village we are studying represents an earlier stage in the development of what we now find in the town, and indeed this is not in detail the case: but as a matter of fact we have frequently found the old people in the town recalling from their childhood customs and features of social organization which are today characteristic of the village. That is to say, one can go back either in time or in space, one can delve into memory or retreat into the bush, and reach the same set of facts. One example will illustrate this. Today in the city a young man, even of a lower class family, selects his own wife and himself makes request of the girl's father for permission to marry her.<sup>2</sup> It is remembered, however, that the boy's father and mother used to make this formal request. In the town the latter practice is general, although the actual selection of partners is made by the young people themselves. The older people look back, with some regret, to the days when older people arranged the marriages, selecting husbands for their daughters and wives for their sons. Coming to the village, we find that there marriages are in fact parentally arranged and controlled, the girl having nothing to say in the matter, and the boy very little. The coming-to-ask-for-the-girl's-hand is a solemn and highly formalized piece of ritual, in which the boy and the girl have no part. Finally, it is only a few years in this village since the

<sup>2</sup> It is still considered proper for a meeting to take place between the parents of the boy and those of the girl, but usually everything, even the date of the wedding, has been determined by the young couple before this.

custom disappeared whereby after the betrothal the boy served his parents-in-law in their house for a year before marriage. And Mr. Villa's information from Quintana Roo indicates that this last custom is still general there. At this point we are in effect back in the early sixteenth century, for this last-mentioned mode of marriage is substantially the same as that described for the ancient Maya by Bishop Landa.

The comparison of these three communities—city, town and village—can therefore be expressed in terms of a process of transition. I think of this process as a shift from one type of society, which the most isolated village represents, towards another type, illustrated by the Yucatecan capital city but even better by our more mobile northern cities. But the process is also, as I have just indicated, in large measure an actual historical process, in that the sequential changes made manifest by the comparison are actual events that have taken place in the chronological development of certain members of the series. In the summary statement of some points of this comparison immediately to follow, the description may be understood in either way: as an account of a general trend in social or cultural type as western civilization has entered Yucatan, or as a somewhat schematic recapitulation of the cultural history of any town in Eastern Yucatan that began as an isolated homogeneous village and became progressively modified by contact with the city and the wider economy and society.

Beginning, then, with more general and obvious differences, I will say that as one moves from the village through the town to the city one finds the communities increasingly mobile and heterogeneous. The increasing heterogeneity is not merely a function of the size of the community, for there are remote villages that are five times as large as the town we have been studying, but are much more homogeneous. By this I mean that the mental world of one individual is much like that of any other; or, to put the same thing in other words, objects and acts have much the same meaning to everyone. Correspondingly, the division of labor becomes more complex; in the village every man is an agriculturalist and performs the necessary domestic tasks to supply himself with what he needs, while town and city are increasingly constituted of interdependent specialists. Such specialists as exist in the village are chiefly "sacred specialists"—midwives, shamans, and reciters of ritual prayers—who perform their functions as matters of prerogative and public duty. But as one goes to town and city the proportion of secular specialists increases; their functions are discharged as matters of livelihood, and their fees, instead of being nominal or traditional, are dependent upon the fluctuations of free economic competition. Communal labor, which is a powerful instrument in maintaining the solidarity of the village community,

breaks down with the introduction first of money-substitute, for personal labor, and then with the development of hired and prison labor. Lending of money, at first without interest, becomes subject to exorbitant interest rates; land comes to be regarded as subject to individual sale and then as security for debt; and later banking begins. In the village, estates are maintained intact until the death of the surviving spouse, even if the children and grandchildren are married; this is an aspect of the unity of the extended domestic family group. But moving to the town and then to the city, one finds distribution of a deceased man's property among the children and the widow more and more common; and testamentary disposition of property becomes familiar.

This same cityward progression sees the gradual breakdown of a familial organization in which the essential features are the subordination of women to men, and of young people to older people, and the responsibility of the individual to his kindred on both sides and of them to him. Marriage ceases to be an arrangement of two groups of kin to become connubially united and to provide for the adult security of two young people just leaving adolescence, and becomes gradually an enterprise of youth and maiden in which the elders are less concerned and little influential. The sometimes elaborate and always religious rituals in support of marriage decrease in complexity and solemnity and at last disappear: the solemn asking for the hand of the bride; the ceremonious delivery of the bride-price with the admonishment of the marriage-intermediary; the ceremony after the wedding wherein the bride formally acknowledges her subservience to her parents-in-law, the groom acknowledges his respectful relation to his parents-in-law, and the two sets of parents-in-law pledge their new relation to each other and their obligation to the sponsors of the wedding.

Similarly, the godparental and *compadre* relationships, which in the village parallel and support the parental and parent-in-law relationships, become less important as institutions of control. With the development of class- and wealth-differences, godparents come to be selected for practical or prestige advantage, and as the *compadres* are no longer on the same social level, the reciprocity of the relationship is broken down. The requesting-the-godparent-to-act ceases to be a religious ritual, and becomes perfunctory; and the ceremony of hand-washing whereby the parent acknowledges his obligation to his *compadre* disappears. At the same time, because of the disparity in mental worlds between the generations, young people cease to show respect for their godparents, and the latter are less and less expected to intervene in the control of the godchild's conduct.

One of the most striking changes is the diminishing importance of re-



ligious belief and ritual. This applies as well to those elements which are of European Catholic origin as to those which are pagan. In the villages practical acts and needs are closely supported by sacred sanctions. Ritual is an immediate expression of an anxiety or a need, and as all men are similarly interested and engaged, this need is often general throughout the community. But in the town and in the city, there are the very Catholic and the less Catholic, as well as Protestants and skeptics; and there are men in the community—few in the town and many in the city—who are not agriculturalists, and for whom therefore the anxieties of sowing and drought are not acute. This topic is of course a very long and involved one; I can only mention a few of the conspicuous differences. The novena, for example—the Spanish or Latin prayer recited before the effigy of the saint or the symbol of the cross—is in the village a spontaneous individual or familial utterance of prayer: a man and his wife organize a novena when their child is sick, or their crop is threatened, or in gratitude for the recovery of the one or the safety of the other. But in the town the annual name-day novena becomes the dominant type, and its performance no longer is an expression of religious mood. It is a social occasion, with a religious flavor, performed, as much as anything, to maintain prestige. And in the city the novena tends to disappear entirely. Furthermore, in the town and in the city men take less and less part in religious activity, whereas in the village they lead.

In the village the solidarity of the local community is expressed in the paramount importance of the village *santo*; other saints are of small consequence. But in the town the patron suffers from competition with individual patrons, and with miraculous *santos* of other communities; and this individuation of the gods is still further developed in the city, where the patron saint of the community almost completely disappears. In town as in village the pagan gods of the cornfield are the objects of worship, for the townsman is, generally speaking, a farmer, as is the villager. In the city these deities are largely gone, except in the peripheral communities where agriculture is still practiced. But village and town exhibit notable differences. In the village the agricultural rites are acts of piety; in the town they are acts of safeguard. They become less the direct responses to crisis, and more matters of traditional performance. In the village the forms are still full of meaning; the layman understands and follows what the shaman-priest says and does. In the towns this is less true. The shaman-priest is not a member of the town-community; he is brought in from a village, and the symbolism of what he does is less understood. It is simply an act of prudence to have him perform his ceremonies: otherwise the crop might fail. In a word, this functionary becomes less of a priest and more of a magician.

The same fact can be approached from a consideration of the pagan gods themselves. In the village these are close at hand, plainly defined, and worshipped in ritual of apparent symbolism. In the town they are more remote; and their individual differences are blurred. The lesser deities—those of the bees, deer and cattle—disappear entirely, while the rain-gods lose their definite attributes and become confused with the guardians of the milpa and the forest. In the villages the mischievous goblin embodied in the ancient clay effigy—the *alux*—is fairly well kept distinct from the true gods; but in the town the *alux* becomes a principal recipient of offerings made in the fields. The effect of this is to reduce what was a true prayer to a being defined in terms of the awesome and the benign, to the mere humoring of a mischievous sprite. The villager and the townsman carry corngruel to the fields in acts that have the same external appearance, but the townsman's act comes to have about the same meaning as the putting out of a pan of milk for the brownie by a Scotch rustic. In the city, finally, all these beings are hardly more than eery characters in folktales told to amuse or frighten.

The same diminution of the religious element is to be observed in the changes that take place in the ideas as to the causation of diseases. In the village a man's sickness is most often brought about by his failure to perform the expected rituals; illness, in other words, is commonly the proof of a lapse from piety; physical well-being is an aspect of moral well-being. But in the town sickness too becomes secularized. Fidelity to ritual is not emphasized as insurance against sickness. Both villager and townsman believe in evil winds as a principal factor in disease, but the villager, constantly instructed and admonished by the shaman-priest, is apt to regard these winds as the punitive aspect of deity, while the townsman thinks of them as operating of their own malevolence, or as encountering the stricken one by mere accident.

We have been struck, in studying this matter of disease and its causation, by the apparent increase of black magic as a cause of sickness and death as one moves away from the village toward the city. This is a matter requiring more investigation to confirm, for our information is drawn from a single village, which may not be typical. But unless further facts change the conclusions, it will appear that sorcery is commoner in the town than in the village, and commoner in the city than in the town. Certainly Dr. Hansen's materials from Merida indicate a development of black magic much greater than that shown by our materials from the village. Tentatively we suggest that this situation is to be explained by two kinds of reasons. One, a historical explanation, points to the diffusion of West

Indian magic, largely medieval European in origin and perhaps partly African, into the city, to which come many Cubans. The other explanation might be spoken of as sociological; this would regard the increase of sorcery in the city as an adaptation to the greater insecurity and instability of life in the city among a people still partly illiterate and primitive in habit of thought. In the city the familial and neighborhood controls are broken; one does not know one's neighbor; and the authority of ritual and religious belief is largely removed.

Each one of the topics to which I have referred in this summary invites further study, and I have not mentioned all that have presented themselves to us. There are interesting changes in the body of folktales and myths. The progressive secularization of the annual fiesta is a matter adapted to detailed investigation, for the rituals are many and well-defined, and the local variants are so numerous that it is possible to describe with some fullness the transition of a sacred ritual to a social entertainment—the change from prayer to party.

The transition which has been sketched in the foregoing paragraphs I conceive, I repeat, as a shift from one type of society, illustrated by the isolated primitive or peasant village, towards another type most nearly realized in our northern cities. In other words this particular historical change that has taken place and is taking place in one particular place, Yucatan, need not be regarded as a unique series of events. It can be compared with the effect of white civilization upon peripheral peoples in other parts of the world, and it can be compared with the gradual civilization of Europe as known to us from history.

The trend of this paper can therefore be summarized by asserting two advantages which inhere in the mode of defining a study of culture change which has been developed in the consideration of our materials. In the first place the simultaneous study of communities enjoying the same fundamental basic culture but exposed in different degrees to outside influences allows the study of culture change directly—the data are under immediate observation—and without the necessity of waiting until the lapse of time has brought about marked changes in a single community. And in the second place, the changes observed can be compared with others like it so as to lead the student into scientific generalizations.

This comparison requires, of course, a terminology which will eliminate what is peculiar to one time and place and will emphasize what is alike in spite of these temporal and local differences. A review of the specific changes which I have mentioned for Yucatan will indicate the direction to be taken by this generalizing terminology. The one type of society, approached

in the village, is a relatively immobile society, culturally homogeneous, in which the ways of life form a single web of interrelated meanings. This culture is closely adjusted to its local milieu. Relationships are personal, and the important institutional controls are familial. The sanctions which control conduct are prevailingly sacred, piety is emphasized, and custom has the force of moral rule. Ritual is highly developed, and expresses vividly the wishes and fears of the people. On the other hand, as one leaves the village and moves through the town to the city, one goes toward a contrasting type of society. This society is much more mobile, and culturally heterogeneous. The ways of life are less closely interrelated; group-habits exist more in terms each of itself, and do not to the same degree evoke a body of closely associated and definatory acts and meanings. These ways of life rest upon, but are not of, their natural environment. Relationships are increasingly impersonal, and formal institutions qualify the acts of the individual. The familial organization is much reduced in importance as an instrument of control. Life is secularized; economic advantage and valuation have penetrated the social body; and the individual acts from constraint or convenience rather than from deep moral conviction. Religious belief and action are much reduced; the individual can no longer express himself in the comfortable grooves of sacred ritual.

I have found it convenient to speak of the former type of society as Culture, and the latter type as Civilization. If this terminology be adopted, the study we are engaged upon is one of deculturalization, rather than of acculturalization. But as there are objections, at least those of usage, to denying the term "culture" to the life-ways of the city man, it may be more acceptable to describe this study as that of the change from folk culture to city culture.

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## PUEBLO SITES OF SOUTHWESTERN UTAH

By J. E. SPENCER

WITH the exception of the work of Palmer, recorded by Holmes in the 1880's, and the passing mentions of Judd in 1917 and 1926,<sup>1</sup> there is no record of the presence of Pueblo peoples along the Virgin river in southwestern Utah. When Dr. Edward Palmer opened the mound on the Santa Clara creek at St. George, he saved from destruction what was possibly the last of such mounds. The bottom lands of the Santa Clara and the Virgin, according to pioneer settlers, possessed more such mounds at one time, but the extensive lateral cutting of the river in the last sixty years has swept them away. There are, however, site remains out of the way of the streams that do furnish at least partial evidence of the extent of Pueblo distribution which may yield clues to the problem.

The writer, while specifically engaged in other tasks in the field, has run on to a number of these sites. Such evidence as could be gathered from badly looted sites is here presented with the hope of adding to the knowledge of the northern periphery.

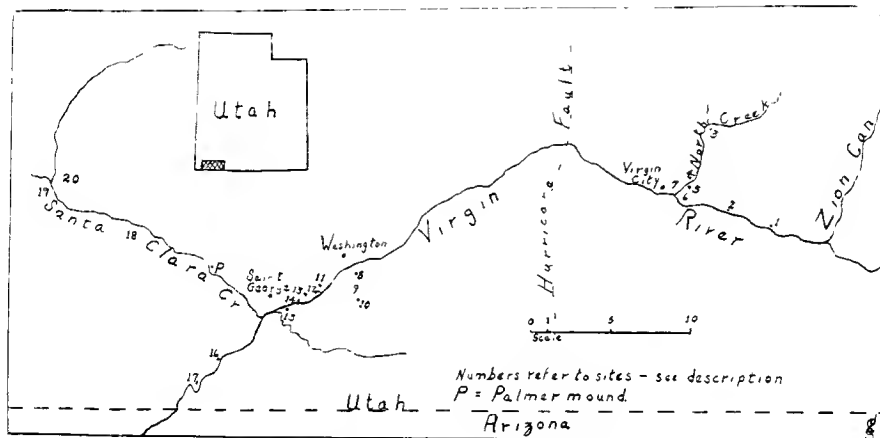
The Virgin river, rising in the Colorado plateaus of central southern Utah, flows westward along the southern border of the state, across the northwestern corner of Arizona, and through southeastern Nevada to the Colorado within the area to be covered by Boulder dam.

Within the plateaus the Virgin flows in a narrow valley bordered by steep vertical walls with narrow terraced strips of bottom land. To the west of Hurricane fault it emerges into the Great Basin where it flows (alternately) through narrow gorged sections and flat basin-like stretches, the latter possessing extensive flats, terraces, and remnant hills. It was upon these benches, terraces, and remnant hills, out of the way of flood waters, yet near the stream and the flat bottom areas, that the settlements were located. The mound opened by Palmer was perched on the outer edge of a low terrace that was being reduced by lateral stream cutting.

The present climatic conditions of the Virgin valley cause it to be akin to the area to the south and west rather than to the north and east. Its rainfall régime gives it an uncertain low precipitation total that supports the scantiest of vegetation. The lands away from the river bottom are exceedingly arid, the dominant vegetative association is the creosote bush, salt bush, and cactus group, typical of southern Nevada. Uplands bordering the area belong to the juniper-pinyon association, considerably cooler at all

<sup>1</sup> W. H. Holmes, BAE-R 4 257, 1886; N. M. Judd, BAE-B 82, 1926.

seasons of the year, having a higher moisture coefficient. On the other hand the bottom lands near the stream have a sufficiently high water table to support a more vigorous plant cover, reported to be a thick growth of willows, cane brakes, and swamp growth by the earlier white explorers of the region. Spring seeps at scattered favorable spots added to the sub-irrigated areas of bottom land; rude cultivation of such areas was practised by the Paiutes, and probably by the Pueblo peoples, who were alert to such possibilities. The whole of the area formerly possessed more bottom land and supported a greater amount of vegetation than at present, overgrazing in the final third of the last century having swept the country bare of grasses



Middle Virgin river, Pueblo village sites.

and started a period of recent stream-cutting. All inferences lead to the conclusion that prior to this recent period there had been no notable change in the natural situation within a considerable period of time. But little could be grown away from the stream today without irrigation, yet along the stream bottoms and at spring seeps native Indian agriculture could probably be carried on with great success.

The sketch map gives the general location of the Virgin valley and the local relation of the sites. Palmer's mound is indicated in reference to the sites of the writer. The writer has not thoroughly searched the valley; rather, a sampling is all that has been accomplished. There are a great many more ideal locations in the upper valley that were not scouted. The lower valley section will probably no longer yield numbers of sites, natural destruction of sites being more complete.

The statements concerning the general nature of the sites are quite

simply made, there being little distinctiveness about any of them. Most of them are located on gravel-topped depositional terraces a few feet above the valley floor at localities where extensive flat sub-irrigated lands were available. A few sites were found on denudational bench levels or erosional remnant hills. The only sites located at a distance from the stream are the three Washington Field sites, located marginally to a sub-irrigated lake bottom plain. Only one type of area seems to have been avoided in the location of settlements, the denudational benches of Moenkopi and Chinle gypsum shales, which present a distinctly uninviting surface.

Looting has gone to such an extent that one can hardly draw a conclusion as to the natural appearance of the abandoned sites. Each is now but a surface of mounded dirt, holes, and scattered slabs of rock, covered with a thin spread of creosote bush. Considerable material has been removed from some of the sites by the farmers owning the surrounding land; bits of yucca cloth, arrowheads, scrapers, bone needles, and other articles were found along with sherds and whole vessels.

There is evidence of buildings at a very few sites, consisting of vague lines of rock and suggestions of melted down mud walls. One site, number 7, located on a denudational bench of middle Moenkopi limestone abruptly overlooking the river valley allowed the only tangible conclusion as to house structures. There is no mistaking the intentional arrangement of cobbles on a bench that does not carry a coating of river gravels. There are the lines for four structures, all closely related. Excavation showed that the rock lines went down to the hard unweathered surface of the limestone, approximately twelve to eighteen inches below the general bench level. Melted down mud brought the present surface up to two to three feet above this limestone floor level. Fire pits were found in the southeast corners of all four, pottery fragments, two whole and several broken manos within the structure outlines, accompanied by fragments of stone tools, bones, ashes, and the like. Extensive burned wood fragments and ash were scattered all over the interior of the one remain most thoroughly excavated. Denudation had affected two of the foundation plans,—those nearest the edge of the bluff. The writer has the feeling that here is evidence of the pit-

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#### LEGENDS FOR PLATE I

- A. North creek black-on-gray nos 2, 5, 7, 8, 9, 10, 12, 15, 18, 20, 24, 25, 26, 27, 28, 36.  
Virgin black-on-white nos 1, 3, 4, 6, 11, 13, 14, 16, 17, 19, 21, 22, 23, 33, 34, 35, 37, 38, 39.  
Washington black-on-cream nos 29, 30, 31, 32.
- B. North creek black-on-gray nos 1, 2, 3, 7, 9, 10, 11, 12, 13, 17, 18, 19, 30, 32.  
With exterior paint nos 26, 27, 28, 29  
Virgin black-on-white nos 4, 5, 6, 8, 14, 15, 16, 20, 21, 22, 23, 24, 25, 31

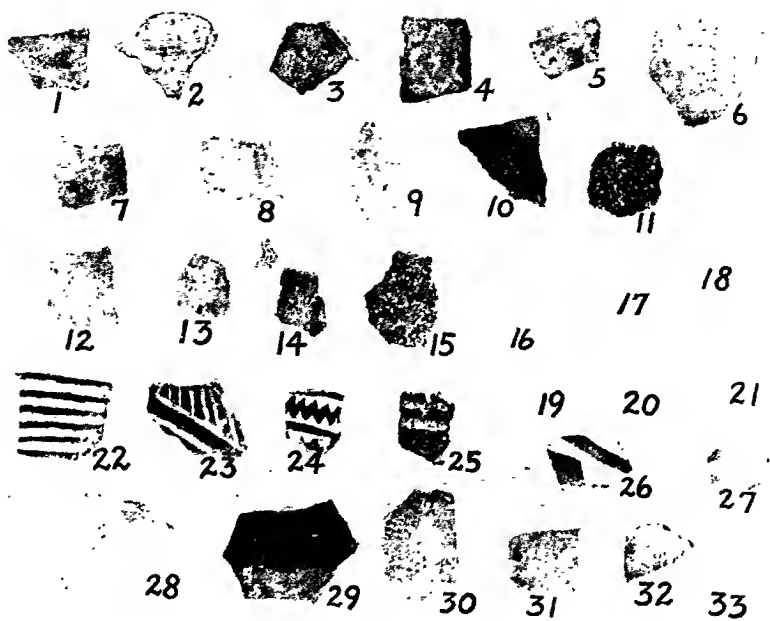


A

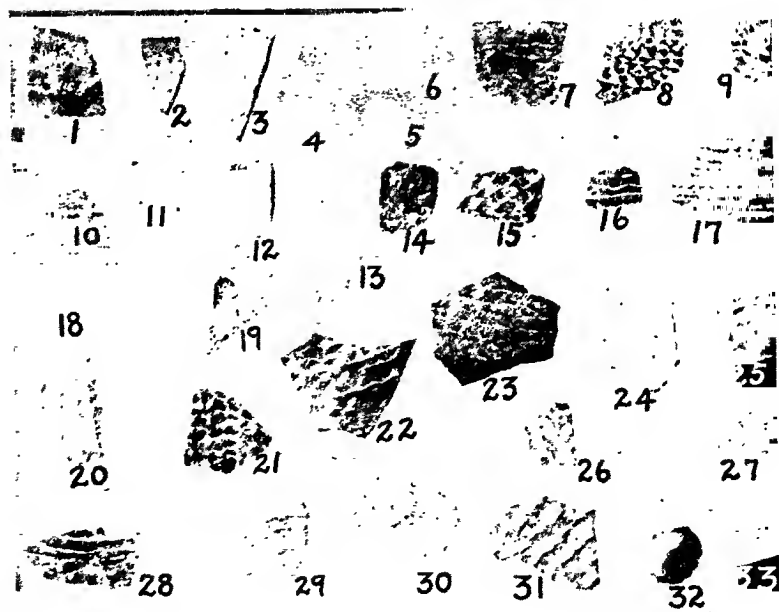


B





A



B

house in some degree of development, but little more could be said from the scanty evidence.

A relative sampling of the sherds from some of the sites was sent first to Dr. A. V. Kidder, and later to Mr. L. L. Hargrave, of the Museum of Northern Arizona. The writer, with these judgments in the background, is inclined to date the time sequence as being from early Pueblo I into Pueblo III. The bulk of the pottery is black-on-white and black-on-gray, but the writer has distinguished thirteen types, of which two are rather uncertain at present. A brief description of each of the types and a few notes on each site will be given later.

The writer would like to present a suggestion with regard to the distinction between black-on-white and black-on-gray types of pottery. Though it is presumptuous for a geographer to criticize archaeologic technique, the writer is dismayed by the difficulty of distinguishing between black-on-white and black-on-gray. Paste, slip, and baking variations all being possibilities affecting color, "usage" would seem very uncertain at best in a small coterie of workers and certainly so for as large an area as the Southwest. The following suggestion may solve a fraction of the trouble. It seems possible to term all slipped ware as black-on-white and all unslipped ware as black-on-gray regardless of the surface color. The pres-

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#### LEGENDS FOR PLATE II

- A. North creek gray: nos. 2, 5, 6, 10, 11, 12, 13, 14, 15.  
 North creek corrugated gray: nos. 29, 30, 31, 32  
 North creek fugitive red: no. 7.  
 North creek black-on-gray (interiors) corrugated: nos. 25, 27.  
 Shinarump brown: nos. 8, 9.  
 Shinarump brown coiled: no. 28.  
 Middleton red: nos. 16, 17, 18, 19, 20, 21.  
 Virgin black-on-white: nos. 1, 3, 4 (unpainted fragments).  
 Virgin black-on-white corrugated: (interiors) nos. 22, 26.  
 Virgin black-on-white tooled: (interiors) nos. 23, 24.
- B. North creek gray corrugated: (exteriors) nos. 20, 21, 22, 23 (pl. IIb, 29), 24, (pl. IIb, 30), 25, (pl. IIb, 31) 26 (pl. IIb, 32), 27, 28, 30, 31  
 North creek black-on-gray corrugated (exteriors) nos. 14 (pl. IIb, 25), 16 (pl. IIb, 27).  
 Shinarump brown coiled: (exteriors) nos. 17, 29.  
 Middleton black-on-red: nos. 4, 5, 10, 11, 18, 19.  
 Virgin black-on-white corrugated. (exteriors) no. 7, (pl. IIb, 22), 15 (pl. IIb, 26).  
 Virgin black-on-white tooled: (exteriors) no. 8 (pl. IIb, 23), 9 (pl. IIb, 24).  
 Tusayan polychrome: no. 1 (exterior), 2, 3, 12, 13  
 Leg of vessel: (from bottom) no. 32  
 Handle fragment: no. 33.  
 Micaceous tempered trade piece. no. 6.

ence of the slip would appear more important than the color, considering that the Pueblo peoples did not have an efficient means of controlling color. Such a standard of determination might slightly increase the percentage of ware described as black-on-gray in some areas, but would not seem to do so in the present case.

Another question has risen in my mind, in regard to the use of the fingers in producing corrugated ware. It is the inference in most literature that the corrugations on all "finger print" pottery were produced by pressing the inside of the finger into the fillet of clay as it is applied to the vessel, sometimes in a regular fashion, sometimes only at an approximate spacing. If this is true of all ware, the finger print lines should always be curved on the face of the corrugation. This method is undoubtedly used to a great extent, but does not fit in all cases. The writer has collected a few sherds which have straight lines of imprint running the length of the corrugation perpendicular to the fillet, parallel to each other. It would seem that some tool, perhaps a reed stem or a small stick, was used in the place of the fingers. Some of the sherds so marked might have been produced by the use of the finger nail if the potter's nails had slight ridges lengthwise of the nail. The writer could produce a fair surface in this manner, but knows nothing about the texture of the finger nails of the Pueblo peoples.

#### POTTERY TYPES

*North creek gray.*—Gray paste, coarse feldspar or occasionally quartz temper, frequently visible on vessel surfaces. Texture is variable, interior surface smoothed or poorly polished, the exterior roughly smoothed over. No decoration. Distribution limited to Pueblo I or early Pueblo II sites, quantity is not great. A type site is No. 4.

*North creek gray corrugated.*—Gray paste, quartz sand or occasionally no temper, texture irregular. Corrugations are variable in spacing and depth, the incisions usually made with the fingers, though infrequently with some instrument having straight parallel ridges. This latter might be a sub-type. Type site: No. 6.

*North creek fugitive red.*—Dark gray paste, feldspar temper, texture uneven. Is medium in thickness and hardness. Sherds badly weathered, paint merely showing as faint tinge on exterior. Distribution is limited to Pueblo I sites along North creek.

*North creek black-on-gray.*—Gray paste, temper most commonly coarse feldspar crystals. Temper occasionally visible on surfaces, which are normally polished inside and smoothed outside. Decorations almost always on inside, usually with carbon paint (though iron paint is frequent on later

ware), in series of narrow lines, lines with fine perpendicularly placed side lines, infrequently dotted lines, and triangles and blocks of color in later ware. Forms are shallow bowls and pitchers. Distribution is throughout the valley, this type not being strictly defined for this small area. May contain sub-types which should later be segregated. Type site: No. 4.

*North creek black-on-gray, corrugated.*—This type is very similar to North creek black-on-gray in all characteristics. Sherds do vary some in color. It is limited in distribution, a type site being No. 8.

*Shinarump brown.*—Paste light to dark brown, temper coarse feldspar and quartz sand, sometimes both, temper visible on the surface. Texture is uneven, not of great hardness, ware medium to thick. Insides of vessels smoothed, outside rather rough. Wide distribution and of considerable quantity. Type site: No. 4.

*Shinarump brown coiled.*—Paste brown, temper feldspar crystals, texture uneven. Ware is brittle, liable to chip easily, particularly exterior of coils. Coils not flattened, but placed closely, ware medium to thick, inside scraped or roughly smoothed. Usually in form of storage jars. Distribution is throughout most of the sites. Type site: No. 9.

*Middleton black-on-red.*—Paste gray black, firing dull to brick red, sherd temper or none at all, texture very even. Vessels very hard and durable, with a clear metallic ring when struck. Rounded rims, unslipped, well polished inside and out. Decorations placed inside bowls and outside jars, pitchers, and close-mouthed jugs; designs in series of medium width black lines of straight or wavy pattern. Distribution is limited to comparatively few sites of Pueblo II to III age. Described by Holmes as "Tusayan ware." Type site: No. 14.

*Middleton red.*—Very like the above but bearing no decoration. Forms limited to shallow bowls and jars. Widely distributed among Pueblo II and III sites. Type site: No. 8.

*Virgin black-on-white.*—Light gray to gray paste, temper medium to fine quartz sand or occasionally sherd, texture usually regular. Vessels are hard and durable, with a very thin to thick white slip always applied to interior and frequently to exterior. Square rim is most common, a smoothly angled rim is present in some later and better ware. Interior surface usually has fine polish, exterior smoothed, polished when slipped. Thin to medium in thickness, each vessel being uniform in itself. Paint mainly an iron compound, usually applied with excellent technique. Designs are series of broad bands, triangles flat and elongated, blocks of color, stepped and scrolled effects, and are always applied to the vessel interior. A few sherds having negative designs were found. Distribution is throughout the valley. Type sites: 13 and 20.

*Virgin black-on-white, corrugated.*—This type is very much like Virgin black-on-white except in lacking widespread distribution. It is limited to some of the more advanced sites, such as Nos. 7 and 8.

*Virgin black-on-white, tooled.*—This should perhaps be a subtype of the above, which it greatly resembles. Some of the sherds show very excellent decorative technique and have a very high polish. The type is not widespread and is probably limited to sites extending into Pueblo III. Type site: No. 8.

*Washington black-on-cream.*—This may be found to be a subtype of Virgin black-on-white owing to its limited distribution. However, it is a distinctive ware and is here given a ranking. Gray to yellow gray paste, sherd temper, even texture, hard and thin vessels in form of bowls only (?), almost always with angled rims. Vessels have a cream yellow slip inside, usually well polished, with thin black designs of broad bands and triangular blocks of color. Distribution limited to sites reaching into Pueblo III (?). Type sites: Nos. 8 and 17.

*Trade ware.*—It should be mentioned that there are some sherds that are probably of trade ware, Tusayan polychrome. This polychrome here occurs in what the writer considers a distinct transition in decorative technique. In the earlier stage the paste is buff, a red-brown wash is applied to almost the whole vessel, exterior and interior, and black paint designs are then applied, all before baking. This ware has a high polish on the interior and a well smoothed exterior. The red-brown wash is worn or weathered off some of the sherds to a considerable extent, but can be seen in plate IV. Only a couple of sherds of the so-called true polychrome were found: where the red-brown wash is reduced to a wide band of very high grade paint and the black design to a narrow border of the red, the surface having a very high polish. Such is plate IV no. 13, though the photography is poor.

Two other extraneous points in regard to pottery deserve mention. One is the presence of a few sherds, widely scattered, having a gray exterior and a red to brown interior. In some cases this is probably due to firing, in others it does not appear so. The second point is the presence of several pieces of micaceous-tempered ware, perhaps trade pieces. One of them is of a dark red-brown paste, mica temper, even texture, thin and hard, rounded lip, polished interior and exterior, design in wavy black lines. Others are gray ware with micaceous tempering.

#### DESCRIPTION OF SITES

1. This site is located on a long low clay-loam bench only a few feet above the valley floor. It had been looted by white treasure hunters. The

find consisted of about 75 sherds of North creek gray, North creek black-on-gray, and Virgin black-on-white, no corrugated or red ware being turned up. Designs of fair execution, about 15 percent of the sherds show paint, this nearly evenly divided between the two types. Probably represents an early Pueblo II occupancy.

2. A clay terrace only a few feet above the valley floor in a very open location. An early site characterized by some Virgin black-on-white, considerable North creek black-on-gray, and some North creek gray pottery. No red or corrugated ware. Late Pueblo I to Pueblo II.

3. This is a small site several miles above the junction of North creek and the Virgin river, on a gravel bench fifty feet above the creek floor, fronting on a relatively large bottom flat. The total number of sherds was fifteen, though a road cut had probably removed other evidence. No corrugated or red sherds were present, there being Virgin black-on-white, North creek black-on-gray, and Shinarump brown. A temporary occupancy in early Pueblo II is suggested.

4. This represents one of the larger earlier sites. It is on a basalt cobble terrace on the west flank of North creek. It is spread along the terrace front, facing on a long narrow strip of bottom land. About two hundred sherds, primarily Virgin black-on-white and North creek black-on-gray, with one Middleton red sherd, some sherds of gray interior showing red exterior color, a little Shinarump brown, and a very few sherds of North creek fugitive red. A couple of handles of pitchers and some arrowheads were picked up here. About ten percent of the sherds bore paint, designs varying from dotted lines and lines with fine side markings through blocks of color and broad scrolls. A few of the sherds represent early Pueblo I at least, while many of the better sherds are Pueblo II.

5. Across the creek from the above and a few hundred yards downstream, on a cobble terrace of the same level, at the foot of a high steep basalt mesa, is a dense site with practically the same contents as number 4. It does have somewhat fewer early sherds and a higher percentage bearing paint. Neither corrugated nor red ware was obtained. The majority of the sherds were about evenly split between Virgin black-on-white and North creek black-on-gray, about ten percent bearing paint. Some Shinarump brown and a few sherds of North creek fugitive red complete the list. Another jug handle fragment and some arrowheads were obtained here too. The arrowheads are of varicolored chert and white quartz. Several sites show white quartz arrowheads and quantities of chippings, but white quartz does not occur locally, and is an indication of trade activity. There is abundant chert to be had in the cobble terraces and from several geologic

strata in the valley. The North creek black-on-gray designs are not of good execution; the vessels were not very well polished. The Virgin black-on-white is mainly of excellent execution, well polished, paint well applied and of pleasing design. It represents a Pueblo II site.

6. This is one of the most varied and advanced of all the sites. The pottery is Virgin black-on-white, North creek black-on-gray, North creek black-on-gray corrugated, North creek gray, Middleton red, Middleton black-on-red, with a couple of sherds of Shinarump coiled and Virgin black-on-white tooled. It is located on the east side of North creek just above the junction with the Virgin river, on a gravel terraced above an extensive flat well-watered area. Fifty percent of the black-on-white sherds bear paint, as do nearly the same number of black-on-gray. These two types represent no more than thirty-five percent of the total sherds; about ten percent are red, and about forty-five percent are corrugated and coiled. The site seems to indicate occupancy in Pueblo II and III.

7. For a small site this one proved of considerable variety and interest. It is the one at which the writer located the only definite house structures. It is located on a high bench of hard limestone just across North creek from number 6. The pottery types represented are fully as varied as those of number 6, but the total number is less. About thirty percent are corrugated or coiled, the red ware is limited though of high quality, about sixty percent of the black-on-white bears paint, making up about twenty-five percent of the total. A couple of sherds of black-on-white corrugated were found. Indications would point to Pueblo II-III.

8. This is the largest site of all, and the most advanced. It is located on a small knoll at the edge of an old lake bottom plain about a half mile from the Virgin river. The sherds consist of Shinarump brown, North creek black-on-gray, North creek black-on-gray corrugated, Virgin black-on-white, Virgin black-on-white corrugated, Middleton black-on-red, and Washington black-on-cream. About fifty percent of the sherds bear paint. The site probably represents Pueblo I-II to III.

9. This site is located on a small remnant hill of hard sandstone conglomerate near the eastern side of Washington Field, as the old lake plain is known, about a mile from the river. Virgin black-on-white, and North creek black-on-gray are in the majority; less than ten percent of the sherds bear paint, North creek black-on-gray corrugated and Shinarump brown are lightly represented. Some few sherds of Middleton red occur, and some of a gray interior and red exterior. This site is neither as large nor as advanced as number 8, probably representing early Pueblo II.

10. A small site is located on a faulted outcrop of hard sandstone con-

glomerate south of number 9. It rendered only a few sherds each of North creek black-on-gray, North creek gray, and Virgin black-on-white, and probably represents an early temporary Pueblo II site.

11. Not a large site, located on a low very open cobble terrace. Virgin black-on-white, North creek black-on-gray, and a very few sherds of Middleton red, with a good many arrowheads. Pueblo II.

12. Located along the flank and crest of a south facing sandstone outcrop. With very few sherds of corrugated, and an equal number of Virgin black-on-white and North creek black-on-gray sherds, it represents an early Pueblo II site.

13. This is located on a small round topped hill, and is a large site. A large percentage of the sherds are Virgin black-on-white, a smaller number are North creek black-on-gray. There are a few sherds each of North creek gray corrugated and Middleton black-on-red. A Pueblo II site.

14. This site yielded a large percentage of Middleton black-on-red, some Virgin black-on-white, a little North creek black-on-gray, a few sherds of North creek gray corrugated, a couple of pieces of micaceous black-on-red (fired red-brown) trade ware(?). This site has yielded a large number of Middleton black-on-red vessels, bowls and pitchers, to treasure hunters, but it never turned out much black-on-white or black-on-gray according to local reports. It is located on an erosional remnant directly at the river's edge. It probably represents Pueblo II of a specialized nature.

15. About fifty percent of the sherds from this site on a gravel terrace are Virgin black-on-white, with North creek black-on-gray figuring about thirty percent, North creek gray corrugated about eight percent. A few sherds each of Virgin black-on-white, Middleton black-on-red, and Shinarump brown were found as well. Pueblo II.

16. Accurate description of this site is now impossible, since drifting sand has accumulated to a depth of many inches over a long bench level within the last fifty years. A few Virgin black-on-white and a number of North creek black-on-gray, as well as a few North creek gray corrugated sherds were found. Pueblo II.

17. The southernmost site of the group is located at the mouth of the Narrows, a thirty mile strip of deep twisting gorges. Virgin black-on-white is predominant, North creek black-on-gray is plentiful; some Middleton black-on-red, and several pieces of Tusayan polychrome trade ware were found. A considerable number of fragments of white quartz and some arrowheads were found here. This is probably a key site in some respects, possibly being the last well located village on the river until west of the Narrows, where Harrington has made brief report of a Pueblo site near Littlefield, Arizona.



18. This high long gravel terrace has recently been halved by a road cut, but from such evidence as was available it seems to be a strong site with a variety of sherds. Virgin black-on-white and North creek black-on-gray are in the majority, North creek gray corrugated, Virgin black-on-white corrugated, Shinarump brown coiled, and Middleton red are all lightly represented. This site is dated as Pueblo II into III.

19. This small site on the brink of a high bluff impresses one as being a bit difficult of residence, and probably represents a more or less temporary late Pueblo I site. The sherds are North creek black-on-gray, Virgin black-on-white, with two or three of North creek gray corrugated.

20. Across the creek from the above site, on a low spreading clay loam terrace is a large dense site dating from early Pueblo II through Pueblo III. Virgin black-on-white, North creek black-on-gray, and North creek black-on-gray corrugated are strongly represented, with about sixty percent of the sherds bearing paint. Around eight percent of the sherds were Middleton black-on-red. A couple of sherds of buff ware similar to the Tusayan trade pieces were found here.

The feeling of the writer, after having gone through the literature describing ware from various surrounding localities, is that the Virgin river pottery indicates a specialization distinct to this portion of the northern periphery, though the area may be found to be much larger after additional research. It was with some surprise that the writer received the statement from Mr. Lyndon Hargrave, of the Museum of Northern Arizona, at Flagstaff, that the Virgin river pottery had near affinities south of the Colorado, in the San Francisco mountain area. To quote from Mr. Hargrave's letter of November 6, 1931, relating to the sampling of sherds sent him:

They are almost without exception characteristic types of the transition from Pueblo II to Pueblo III, and differ only in minor details from type specimens from this region.

Beyond stating this rather surprising correlation there seems little to be said at present. The work on the northern periphery has so far been so spotty as to make any conclusions impossible. The writer is aware of no adequate description of Northwestern Arizona. When a study has been made of the isolated country lying between the Utah border and the Colorado river perhaps some additional light may be thrown on the matter of regional development and westward spread of Pueblo culture.

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NORTH AMERICAN INDIAN TRADITIONS  
SUGGESTING A KNOWLEDGE  
OF THE MAMMOTH<sup>1</sup>

By W. D. STRONG

ONE of the perennially fascinating problems of American ethnology concerns the possibility of Indian traditions preserving to modern times a memory of the mammoth. As in all hypotheses based on survivals, especially those enmeshed in the vague web of folk-lore, there has been much discussion but little unanimity of opinion on the matter. The wisest men have, like Tylor, presented the various possibilities pro and con and let it go at that. Of late years, aside from the alleged occurrence of carvings depicting the Asiatic elephant at such Maya sites as Copan and Palenque,<sup>2</sup> the "elephant problem" north of Mexico, at least so far as concerns folk-lore, has been lulled to sleep. Palaeontologists and archaeologists on the other hand have been exceedingly active and with the definite establishment of the contemporaneity of man and extinct species of bison and the ground sloth, as well as less clear cases suggesting association with extinct proboscideans, the corresponding ethnological evidence with certain new additions seems worthy of consideration once again.

Myths or traditions purporting to refer to extinct animals formerly numerous in certain areas usually fall into one of two classes.<sup>3</sup> Tales of the first class suggest an easy mythical rationalization based on the observation of fossil bones, objects which would appear to have always excited human interest. Such may be termed "myths of observation" and, being based in part on actual phenomena, are often very puzzling as to the modicum of truth they do contain. The second class, which may be called "historical traditions," seem to embody a former knowledge of the living animals in question, perhaps grown hazy through long oral transmission. Obviously, the first class of myths, intrinsically interesting though they may be, cannot be taken as evidence that the people ever knew the living animals. The "historical traditions," however, if they are specific enough and numerous enough may have definite historical value. That conclusive

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<sup>1</sup> This paper forms an unavoidably delayed addition to a volume of original papers presented in typescript by his students to Dr. Robert H. Lowie on the occasion of his fiftieth anniversary.

<sup>2</sup> Elliot Smith, 1924. Also *Illus. London News*: 86-87, Jan. 15, 1927. In regard to the latter see Fiske, I: 134, for contemporary opinions of the Waldeck drawings.

<sup>3</sup> Tylor, 306-332, 1878, discusses this matter as well as the "elephant problem" in America.

proof of such suggested associations will generally rest with the palaeontologist and archaeologist goes without saying.

Both classes of tales apparently referring to the mammoth or mastodon seem to occur in North America. The Eskimo of Bering straits claim that the bones of the mammoth, so common in that region, are those of a huge animal that burrows under the ground. Should it breathe air it dies—hence the numerous bones.<sup>4</sup> This appears to be an extension of the identical belief widely held by many peoples of northeastern Asia—including the Chinese and such Siberian tribes as the Samoyed, Ostyak, Tungus, Buriat and Yakut.<sup>5</sup> That such a rationalization may arise independently, however, is suggested by the fact that Darwin's guides, who showed him a mastodon skeleton on the Parana river, had also come to the conclusion that it was a burrowing animal of huge size.<sup>6</sup> In this same category of "myths of observation" we may place the Mexican tales of giants whose enormous bones are found in the soil, and the medieval European belief that certain fossils were relics of giants, devils, pagan heroes and Christian saints.<sup>7</sup> Thomas Jefferson has given the account of one Stanley, who was captured by Indians near the mouth of the Tennessee and taken west of the Missouri river to a place where great bones were abundant. His captors told him that the bones belonged to great animals that still lived in the north, and from their description Stanley inferred they meant the elephant.<sup>8</sup> Similarly, the vague Algonkian reference given by Schoolcraft that "Manabozho killed the monsters whose bones we see under the earth" is perhaps another transference from actual fossils to current mythology.<sup>9</sup> The importance of fossils to the Indians is mentioned by Longueuil, who, in 1793, saw great skeletons at Big Bone Lick which were reverently treated by the natives.<sup>10</sup> Likewise the name "Père aux Bœufs," a translation of the Indian name, was given to the bones of huge extinct animals on the banks of the Ohio river.<sup>11</sup> A careful survey of the literature would reveal many more Indian "myths of observation" based on fossil bones but for present purposes the foregoing will suffice.

The second class of tale, which strongly suggests historical tradition,

<sup>4</sup> Nelson, 443, 1900.

<sup>5</sup> Tylor, 317, 1878; Scott, 470, 1887; Laufer, 24-31, 1925.

<sup>6</sup> Darwin, 133, 1845.

<sup>7</sup> Scott, 475, 1887; Lucas, 356, 1901.

<sup>8</sup> Scott, 475, 1887.

<sup>9</sup> Schoolcraft, 319, 1851. An Ojibwa version of this myth has recently been sent me by Dr. Albert B. Reagan.

<sup>10</sup> Scott, 474, 1887.

<sup>11</sup> Tylor, 320, 1878, quoting Buffon.

is best illustrated by the well known account of Charlevoix, in which he refers to certain northeastern Algonkian peoples, probably the Abnaki:

Il court aussi parmi ces Barbares une assez plaisante tradition d'un grand Orignal, auprès duquel les autres paroissent des Fourmis. Il a, disent-ils, les jambes si hautes que huit pieds de neiges ne l'embarrassent point: sa peau est à l'épreuve de toutes sortes d'armes, & il a une maniere de bras, qui lui sort de l'épaule, & dont il se sert, comme nous faisons de nôtres. Il ne manque jamais d'avoir à sa suite un grand nombre d'Orignaux, qui forment sa Cour, & qui lui rendent tous les services, qu'il exige d'eux.<sup>12</sup>

While the conception of a huge "chief" of each species of important animals is still a common belief among the northeastern Algonkian, the idea of an arm coming out of his shoulders which he uses as we do ours is unique. As Tylor points out, it is hard to imagine anything but the sight of a living proboscidean giving rise to such a tradition. Certainly mere observation of fossil remains would not suffice as a causal explanation.

The same can be said in regard to a portion of a long myth I recently secured from the Naskapi Indians. These are an extremely conservative group of Algonkian-speaking caribou hunters isolated in the interior of northeastern Labrador. The first episode of their long culture hero and trickster cycle reads in translation as follows:

Long ago there was an old man, his wife and daughter. The old man told his wife to come with him and cut birch for ladles. A huge monster, Kátcheetohúskw, heard them chopping wood and came and killed them both. He trampled and ate the bodies but he tossed aside an unborn child carried by the woman. It was unclean.

For a long time the daughter cried alone in her tent. Then, following her parent's tracks, she came to where they had been killed. She found the baby, cleaned it with moss, and put it in a wooden cup to keep warm. The baby grew rapidly and played about. She gave him a wooden bow but he stretched and broke it. Then she made him one of deer ribs but this he broke also. He said to his sister "I can make a better one than that," but she said, "No, you are too small." He then went out and cut a dry juniper from which he made four arrows, then he made one of spruce. . . . Soon he went out, saying he was looking for squirrels, but he really hunted for the monster. He found large, round tracks deep in the snow and sang his hunting song. The monster heard someone singing and told the black bear to go down and kill him, then the white bear, and last of all the big brown bear. Djákabish, for that was his name, asked each of these "Are you the one that killed my father?" When they said "No," he sent them back. Djákabish sang his song again. The monster asked the brown bear how big Djákabish was. The big bear told him that Djákabish was very small.

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<sup>12</sup> Charlevoix, V: 187, 1744. *Orignal*, sometimes translated "elk," signifies the moose.

Then the monster said "All right, I will got out and kill him." He came. Djákabish, very small now, was in the monster's deep tracks. His bow and arrow were far below him. He thought that the monster would hit him with his long nose. This the monster did, knocking him to where his bow and arrow were. The blow made Djákabish bigger and he stood up. He said "Who killed my father?" The monster said "I did." Djákabish was very big now. He asked the monster "How hard was my father to kill?" The monster answered, "About as hard as a dry juniper." Djákabish shot an arrow into a nearby juniper which broke. "That was not hard enough," he said. "He was hard as a rock," the monster answered. Djákabish then shot at a rock which broke into pieces. This frightened the monster and he began to run. Djákabish shot him with two arrows, one in each hip bone. The monster said, "You kill me, cut me in little pieces, eat my head but keep my ears for your bed." Then he died.

Djákabish did as he was told and cut up the body into different sized pieces. Some of these he threw into the air and these became birds and flew away, others became animals and walked off. . . . The monster's head he took to camp and gave to his sister to cook. He told her to fix the ears for his bed. Then he went hunting. While his sister cooked the head she put her fingers in the pot and licked them off. Her mouth shut tight and she could not talk. Then the head of Kátcheetohúskw got out of the pot and followed the trail of Djákabish. But Djákabish heard its large teeth chatter as it came and shot it with an arrow.

Here we may leave the story.

When asked to describe Kátcheetohúskw, the informants said he was very large, had a big head, large ears and teeth, and a long nose with which he hit people. His tracks in the snow were described in their stories as large and round. One Indian who had seen pictures of the modern elephant said he thought that Kátcheetohúskw was the elephant. Bearing in mind the modern Eskimo legend of live mammoths in the interior of Alaska, which developed as the result of the naturalist Townsend's realistic drawings shown them some years before,<sup>13</sup> it may fairly be asked whether the elephant-like characteristics of this Naskapi monster may not have been introduced by the whites in much the same manner. Personally, I do not think so for the older Indians questioned were unanimous in declaring that such had always been the description of Kátcheetohúskw so far as they had any knowledge. In this regard it is probably significant that the Alabama and Koasati Indians of the Southeast also "insist on translating man-eater (Atipa tcbá) as "elephant."<sup>14</sup> Moreover the incident finds too many

<sup>13</sup> Lucas, 358, 1901.

<sup>14</sup> Swanton, 209, 1913. Stories involving this sort of monster are widespread in North America. Their collection and analysis would be essential to a complete understanding of the present problem.

parallels in eastern Indian folklore generally to be of recent Caucasian introduction.

Dr. Frank G. Speck has kindly sent me an interesting tale which he recently secured from the Penobscot Indians of Maine. The myth concerns the adventures of Snowy Owl, a Penobscot culture hero, and for present purposes may be condensed as follows: Snowy Owl was searching for a wife far to the south. He noticed that the watercourses were drying up and followed up a valley to seek the cause. He saw what seemed to be hills without vegetation moving slowly about. Upon closer scrutiny he saw that these masses were really the backs of great animals with long teeth, animals so huge that when they lay down they could not get up. They drank for half a day at a time. Snowy Owl went on and after many adventures secured his wife. Then he returned to the place where the animals had their "yards." He cut certain trees upon which the monsters were accustomed to lean at night so that when they did so the trees would break. Thus the animals fell upon the sharp stumps and Snowy Owl shot them all. The closest American parallel to this story I have been able to find occurs in the writings of Cotton Mather in the seventeenth century.<sup>15</sup> It is a legend of the Ohio Indians, believed by Mather to refer to the mastodon. The story states that such animals were once abundant, feeding on the boughs of the lime tree; they did not lie down at night but leaned against a tree to sleep. Dr. Speck calls my attention to the interesting European parallel occurring in the sixth book of Caesar's commentaries on the Gallic Wars where "elks" of the Hercynian forest of Germany are described as having no joints in their legs, hence they could not lie down nor get up if thrown down. They took their rest leaning against trees and hunters finding such trees loosened them at the roots or cut through them so that the weary "elk" would fall down with them. The occurrence of this rather close but apparently fortuitous analogy in European mythology is, as Dr. Speck points out, a matter of theoretical interest.

To return to other traditions in eastern North America suggesting a knowledge of the mammoth we may note Boyle's remark that

among the Indians, both Ojibwa and Iroquois, there exists a somewhat-vague belief in a large animal that once ranged the forest, and so strong was it that it was able to crush trees that stood in its path.<sup>16</sup>

Morgan writes that there were current among the Iroquois, fables of a "buffalo" of such huge dimensions as to thresh down the forest in his march. He also mentions the "Great Moose" of the Algonkians that had a fifth leg

<sup>15</sup> Quoted by Scott, 475, 1887.

<sup>16</sup> Boyle, 25, 1906.

between his shoulders which he used to prepare his bed. He believed that these were probably traditional references to the mammoth.<sup>17</sup> The Micmac of Nova Scotia are also said to have a tradition suggesting the mastodon,<sup>18</sup> and Scott, on evidence which I have been unable to verify personally, extends this type of legend throughout northwestern Canada.<sup>19</sup> Shaler sums up the northeastern legendary evidence of this type as follows:

There seems to have been an obscure tradition among some portions of the Indians of eastern North America, that on the unexplored and distant recesses north of Lake Ontario and the St. Lawrence, there dwelt some great mammals which had a size like that of the elephant. With the early voyagers this was accepted as proof that the mammoth still lived in the western part of Labrador; and on some of the first maps this territory was laid down as the habitation of these surviving members of the giant race whose bones strewed the surface of so large a portion of the continent.<sup>20</sup>

More or less complete skeletons of these extinct proboscideans have been reported from Ontario, Manitoba, Nova Scotia and the Yukon territory,<sup>21</sup> and, according to Boyle, have been found so superficially buried in the first named province that they appear to be quite recent.<sup>22</sup>

Farther to the south, the occurrence of "elephant" legends among the Alabama and Koasati have already been noted.<sup>23</sup> Similarly, among the Chitimacha,

A long time ago a being with a long nose came out of the ocean and began to kill people. It would root up trees with its nose to get at persons who sought refuge in the branches, and people lived on scaffolds to get away from it. It made its home in a piece of woods near Charenton, and when guns were introduced the people went into this wood to kill the monster, but could not find it. When the elephant was seen it was thought to be the same creature, and was consequently called *Neka-ci kamí*, 'Long-nosed spirit'.<sup>24</sup>

Likewise, one of the earliest records of the Atakapa in Louisiana tells of their tradition that a beast of enormous size perished in one of several nearby water courses. Duralde, the chronicler, adds that the subsequent discovery of an elephant skeleton in Carancro bayou seemed to realize this tradition.<sup>25</sup>

<sup>17</sup> Morgan, II 254, 1901.

<sup>18</sup> Piers, 167, 1910.

<sup>19</sup> Scott, 475, 1887.

<sup>23</sup> The "Giant Elk" traditions of these tribes must also be considered in this regard, Swanton, 124, 185, 186, 1929.

<sup>24</sup> Swanton, 355, 1911.

<sup>25</sup> Swanton, 363, 1911.

<sup>20</sup> Shaler, 159, 1871.

<sup>21</sup> Piers, 164, 1910.

<sup>22</sup> Boyle, 24, 25, 1906.

In the light of this general mythological background suggesting a dim but actual tradition of the time when the mammoth lived in North America, I incline to regard such accounts as the above from the Naskapi, Penobscot, and those recorded by Charlevoix, Morgan and Swanton, as historical traditions rather than mere "myths of observation" or recent Caucasian introductions. In the case of the isolated Naskapi it appears that they have preserved many social and religious concepts long vanished from among their southern neighbors,<sup>26</sup> and if their mythology does the same it would not be surprising.

It must be remembered that the problem of the contemporaneity of man and the mammoth involves the question of the recency of the extinction of the mammoth quite as much as it does the antiquity of man in the New World. To date, palaeontologists have seemed more willing to grant recency to the mammoth than have the majority of American anthropologists to grant any geological antiquity to the American Indian. While there is no apparent reason why man should not have come to North America with the rest of the Pleistocene Old World fauna of which he is a part, the various discoveries thought by some to demonstrate his occurrence in the Pleistocene period of the New World have not as yet received general acceptance. For this and allied reasons, certain leading anthropologists incline to the belief that the elephant tribe was extinct when man first entered the North American continent.<sup>27</sup> Since the association of the two is still a matter of dispute, all evidence bearing on the problem is worthy of examination and careful consideration. It hardly needs to be pointed out that the final conclusion in this matter may have a direct bearing on the theories of those who see in every elephant-like artifact, carving or legendary animal of the New World, a reflection of the modern Asiatic elephant.

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<sup>26</sup> Strong, 287-288, 1929, 2, 1930. Notably, the institution of cross-cousin marriage and a concept of a supreme deity, the caribou god.

<sup>27</sup> Wissler, 350, 1922, and Kroeber, 350, 1923.



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A POSSIBLE CULTURE  
SEQUENCE AT MITLA, OAXACA

By RALPH L. BEALS

IN JANUARY 1933 a few observations were made of the ruins in the vicinity of Mitla, Oaxaca, Mexico. These may be of interest, particularly as some of them may not be possible a few years from now. The main Mitla ruins are well known and have been partially excavated by Batres, Saville, and perhaps others, but so far as I know, no account of these excavations has been published, and no suggestion made of the chronological possibilities or even of two periods of construction. Bandelier, who gave one of the best descriptions, may note this, but writing from the field, I am unable to check his description.

The main ruins of Mitla lie within the limits of the modern town of the same name at the eastern end of the valley of Tlacolula, a wide fertile depression, about forty-five miles from the city of Oaxaca and the hill top ruins of Monte Alban. Two types of structure are found at Mitla. The most publicized is the group of buildings including the Palacio, Hall of Monoliths, Hall of the Paintings, etc. All the buildings of this type lie north of the river running through town. Though some have almost entirely disappeared through the use of the stone for building purposes, others are in an excellent state of preservation and show few effects of the frequent violent earthquakes of the region. For convenience I shall designate this as type 1.

All the type 1 structures apparently were built about interior courts, sometimes as four separate buildings, but in one case a single connected building surrounds two courts, one without direct access from outside. Two of the groups were built on mounds made of cobbles set in adobe and probably faced with cut stone. One group is noted for its use of large monolithic round columns and for massive lintels, some of which are estimated to weigh five or six tons. Several cruciform subterranean chambers have been discovered beneath these buildings, and further excavation might reveal more.

Two outstanding features characterize type 1 buildings. One is the perfection of the stone cutting, so carefully done that the stones are largely if not entirely set without mortar. In view of the fact that the interior of the massive walls is often of rubble and adobe and the cut stone merely a facing, it becomes the more remarkable that they have resisted earthquakes so well. The second unique feature is the extensive fretwork carving, solid in the subterranean chambers, but in the superstructures made of many relatively small interlocking pieces of stone carved with great accu-

racy. Fragments of what were evidently once extensive hieroglyphic (?) paintings also remain on some of the smooth surfaces.

The less publicized type of ruin, which I shall call type 2, exists on both sides of the river at Mitla. Like type 1, it is built about a central court, but nearly all trace of the buildings has disappeared. Enough remains, however, to show they were constructed, not of stone, but adobe bricks. The mounds, except the adobe brick "Mitla pyramid," as in type 1, are of rubble stone set in adobe. In each of the two groups at Mitla the mound to the east is two or three times as high as the others.

Representatives of both types of ruins are found elsewhere in the valley. Type 1 is represented by several subterranean chambers toward the end (east) of the valley, one well up on the mountains. Type 2 occurs in scattered mounds known as mogotes both east and west of Mitla and, I believe, also in the hill-top ruin known as the Fortaleza, Fortress, about two miles west of Mitla.

It was in examining the Fortaleza that the possibilities of establishing a sequence first appeared. Consequently a description of this ruin is in order. It is located on top of a hill several hundred feet in height with abrupt and frequently precipitous sides everywhere but at the southeast where a shoulder gives easy access to the summit. At the edge of the steep slopes are thick walls of well-laid but natural stone set in adobe mortar, the height varying directly with the natural accessibility of each place from below. It is an intelligently and carefully constructed work. On the southeast, where there is an easy slope, double walls have been built of even better construction. They are from 6 to 9 feet in thickness and range from 15 to 25 feet in height. A gate pierces each wall, but one must traverse fifty or sixty feet between the two walls, rounding a corner, from the outer gate to the inner.

Within the walls on the highest portion of the hill are ruins of two groups of buildings of adobe brick of extraordinary hardness, apparently built about two courts. The easternmost building is the best preserved, portions of the wall rising perhaps 10 feet. Remains of plaster show on one wall and on the inner facing of an opening in the east wall, but there is no sign of paint.

The opening or "window" mentioned is about 6 inches in diameter and faces due east, or nearly so, directly toward the present Mitla church, a comparatively modern structure standing on the ruins of one of the northernmost of the pre-Columbian buildings of type 1. Behind the church is a fragment of adobe brick masonry, which excavation probably will show to be partially pre-Columbian, although one cannot be sure from superficial

examination. If so, it is the only adobe brick work connected directly with the type 1 structures.

The walls of the Fortaleza, both defensive and building, contain a very large number of potsherds. Time did not permit the making of large enough sherd collections for a statistical analysis of value, but fifty percent of the sherds are very light to fairly dark gray ware from very thin to medium (1 8 to 3 8 inches) in cross-section, smoother inside than out, the paste fine, the finish often almost polished. A very few are black outside. The next most common sherd is also gray, 3 8 to 1 2 inches in thickness, of a coarse paste and rough finish. The remainder are scattered red or buff in widely varying quality, some of the red a natural coarse ware, the remainder slipped. The only decorated sherd is crudely striped in black on the natural gray ground. An occasional black ware sherd occurs.

A similar series of sherds is scattered about the interior of the walls. Outside the walls the proportion of red and buff ware seems slightly higher. Northwest from the buildings but inside the walls on the surface are several well-shaped fragments of legless or slab-metates. In neither the Fortaleza nor in the Mitla pyramid is there evidence of cut stone except for one block in the wall near the entrance to the Fortaleza, (and perhaps a trough-like stone, and what may be a fragment of a small pillar lying on the surface inside). The type 2 ruins south of the river show cut stone in two places. One is the rectangular outline of what appears to have been a room, the corners of which lie *under* the two best preserved mounds. The other is at the base of the remnant of adobe wall on top of the largest mound. The wall rests on a stone foundation, part of which is made of square cut stones of the kind occurring in the type 1 ruin.

Approximately the same series of pottery as at the Fortaleza occurs within the adobes of the pyramid and is scattered in abundance outside the type 1 ruin, within the one unexcavated series of courts, and also in certain parts of the mounds. The mound situation is complicated, and I shall refer to it later. I observed but two sherds in the mounds or walls of the type 1 ruin, and these were thick, crude, red ware. Within the unexcavated court I found on the surface (mixed with modern pottery) a decorated sherd like the one from the Fortaleza, a brown-on-buff, and a corrugated sherd, the latter possibly modern.

The mounds south of the river (type 2) show signs of several floor levels. Below the lowest floor of the northernmost mound occurs approximately the same pottery association as elsewhere. This recurs in the adobe brick walls above, but the intervening layer appeared sterile. The major or eastern mound showed only one crude red sherd (similar to the two observed

in the type 1 ruin) in the lower level. In the second level I observed several decorated sherds of the types noted above, but the remainder of the mound is too decayed and injured by excavations to permit judgment without digging. The outside of the mounds and the building walls above have been covered with repeated coats of plaster and red paint. Evidence of a similar plaster floor may be seen in the nearby river bank at a depth of about  $2\frac{1}{2}$  feet.

To summarize the above data: (1) The Fortaleza appears to be oriented toward the only part of the type 1 ruins where there is possibly pre-Columbian adobe construction. (2) The same type pottery found about the type 1 ruin occurs in both the adobe, adobe mortar, and around the type 2 ruin. (3) The southern mounds seem to have been constructed partly over ruins of type 1, and the adobe structure has a stone base including a few stones apparently taken from a type 1 structure. In addition, it deserves to be emphasized that none of the elaborate stone work, cornices, mosaics, frets, etc. of type 1 occur in connection with type 2 structures. Striking also is the fact that although both types make use of rough stone set in adobe, sherds with unimportant exceptions occur only in type 2.

One or two other points of wider comparison may be of interest. The slab type metates are found also at Monte Alban. The dominant pottery of Monte Alban so far is black ware. There is also a coarse gray ware apparently similar to the coarse gray ware of Mitla. But practically no black ware shows at Mitla, at least in superficial examination such as mine, while the fine smooth Mitla gray ware is apparently entirely lacking at Monte Alban. Nor does Monte Alban show any sign of either Mitla's fine stonework or adobe walls, but rubble stone in adobe mortar with rough stone facings, probably plastered, predominates. I am indebted to Dr. Daniel Barbolla, assistant to Dr. Caso at Monte Alban, for this last information.

#### SUMMARY

Two types of structure occur at Mitla, neither of which occurs at Monte Alban, 45 miles away. Type 1 has long been recognized as unique and, as far as I know, no comparable structures have been found further than 10 or 15 miles from Mitla. Tentatively I suggest there have been two periods of construction at Mitla.

Period I I believe the earlier. It is characterized by the type 1 ruins with highly developed use of cut stone, probably the finest craftsmanship in aboriginal America. There is an almost complete lack of potsherds, which may be indubitably associated with the construction of the buildings of Period I.

Period II is characterized by adobe brick structures with a carry-over of the rubble stone in adobe technique of Period I. Abundant pot sherds occur in both adobe, bricks and rubble stone structures of Period II, and the same series is scattered thickly about the structures of both periods. The utter lack of cut stone in Period II except intrusively is significant, particularly as Period II mounds appear to overlie cut stone construction.

From the juxtaposition of Period I and II structures, as well as the orientation of the "window" of the Fortaleza, it is judged the builders of Period II utilized the Period I structures and may have been the same people. Against this is the great break in building technique. The possibility of a sudden and violent shift in the dominant population is strongly suggested by an unfinished cruciform chamber near Mitla belonging to Period I, some of the blocks for which were left on the road from the quarry.

These suggestions are advanced as an hypothesis which it is believed may easily be proved or disproved. Relatively little excavation, or even study of the collections of previous excavators, should suffice.

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IT HAS been generally agreed by various authorities that the bow-drill, whether used for fire-making or for drilling, was confined to northern North America. Wissler says,

... among the Eskimo we find drills turned by a strap pulled back and forth and also operated by a strong bow ... The only other New World localities in which these forms of drilling occur are among the Northern Algonkin. From the native sketches in Mexican codices and the references of early writers, we infer that the universal mode of drilling was by rolling between the palms of the hands. ... It appears that in aboriginal times practically the whole of the New World kindled fire with the simple hand-drill. Only among the Eskimo and a few of the adjoining Indians were other types of drill in use, as may be inferred from the preceding discussion.<sup>1</sup>

McGuire makes the following statement,

The use of the bow-drill in America appears to be confined chiefly to the Alaskan and North Canadian aborigines, among whom it is quite common.<sup>2</sup>

Hough reports,

Among the northern Indians in central and northern Canada, however, the bow is used. Sir Daniel Wilson, in his work on Prehistoric Man, notes that the Red Indians of Canada use the drill bow. ... It is perhaps true that some of the Dakotas did use the bow at times, but it is not correct to place it as the customary tool of the whole stock. On the contrary, there is evidence that they used the simple means. ... Thomas C. Battey says that the Sac-Fox Indians (Algonquian stock) used a soft-wood drill and a hard-wood hearth. "The drill was worked by a bow" ...<sup>3</sup>

Morice mentions the fact that the Carrier used a bow-drill with a hand piece for drilling fine holes.<sup>4</sup>

Skinner, likewise, states that the bow-drill was used for fire-making by the Northern Saulteaux, the Menomini, and the Plains Cree.<sup>5</sup>

Speck describes and figures a horizontal chest bow-drill used by the Huron, but expresses no opinion as to its origin or antiquity.<sup>6</sup>

<sup>1</sup> C. Wissler, *The American Indian*, 132 *et seq.*, Oxford University Press, 1922.

<sup>2</sup> J. D. McGuire, *A Study of the Primitive Methods of Drilling*, USNM-R for 1894, 725, 1896.

<sup>3</sup> W. Hough, *Fire-Making Apparatus in the United States* National Museum, USNM-P 73 24-25, 1928.

<sup>4</sup> A. G. Morice, *Notes on Western Dénés*, Trans. Canadian Inst. Session 1892-93, 143.

<sup>5</sup> A. Skinner, *Notes on the Eastern Cree and the Northern Saulteaux*, AMNH-AP 9 138, 1911. *Material Culture of the Menomini*, MAHHF-INM, Misc. 20-301, 1921. *Notes on the Plains Cree*, AA, n.s., 16-81, 1914.

<sup>6</sup> F. Speck, *Notes on the Material Culture of the Huron*, AA, n.s., 13-223, 1911.

Winchell figures a bow-drill which he alleges is like that used by the Dakota.<sup>7</sup>

Birket-Smith, in writing of the fire drill with bow or thong, is of the opinion that,

. . . the fire drill with bow or thong drive occurs among a large number of sub-arctic tribes, both of Algonkian and Athapaskan stock, extending westwards as far as the Tahltan. They are also found further south by the Great Lakes (Iroquois, Menomini, Sauk and Fox, Ojibway) and on the northern plains among the Plains Cree and perhaps the Northern Dakota. . . . The fire drill with bow and thong drive among the Athapaskan tribes in Alaska, such as the Kaiyukhotana and Kutchin, are easily explainable as the consequence of Eskimo influence; but what is the position with regard to all that long series of other occurrences? Just here it is of the greatest importance to observe that no report from the seventeenth or eighteenth century makes any mention of these forms of fire drills, whereas the simple type is repeatedly referred to. It would be quite incredible that not one of the many French authors who at that time wrote about the Laurentian regions had mentioned the bow-drill if it were known at all. The only explanation is . . . that the bow-drill . . . has been introduced to the eastern Indians from Europe. To this day the bow-drill is used for fire-making in Macedonia and Sweden. . . . On the other hand the fire drill of the Eskimos and Alaskan Indians probably originates from Asia, where bow-drills are exceedingly common everywhere. . . . At some place in Northwest Canada the boundary must be drawn between the type imported via Europe and that imported via Asia."<sup>8</sup>

No one yet, to the best of my knowledge, has stated that the bow-drill has been found further south than the Great Lakes region; and certainly, no one has ever intimated that it occurred as far south as the Pueblo area of the southwestern United States.

It is true that James Stevenson, in describing the collections obtained in New Mexico, mentions a bow-drill; but he describes, figures, and evidently means a *pump-drill*.<sup>9</sup>

Kidder and Guernsey, and Morris describe and illustrate fire-drills, but these are undoubtedly simple hand-drills.<sup>10</sup>

<sup>7</sup> N. H. Winchell, *The Aborigines of Minnesota*, Mnn. Hist. Soc., 482, 1911.

<sup>8</sup> K. Birket-Smith, *The Caribou Eskimos. Report of the Fifth Thule Expedition*, vol. 5, pt. 2 97-98 Copenhagen, 1929.

<sup>9</sup> J. Stevenson, *Illustrated Catalogue of the Collections Obtained from the Indians of New Mexico and Arizona*, in 1879, BAE-R 2: 370, 1883. *Illustrated Catalogue of the Collections Obtained from the Pueblos of Zuni, New Mexico, and Wolpi, Arizona*, in 1881, BAE-R 3. 582, 1884.

<sup>10</sup> Kidder and Guernsey, *Archaeological Explorations in Northeastern Arizona*, BAE-B 65 120-121.

E. H. Morris, *Antiquities of the Region between the Mancos and La Plata Rivers, in Southwestern Colorado*, BAE-R 33. 178, 1919.



Nordenskiöld and Fewkes report fire-drills from Mesa Verde, but these, too, appear to be of the simple hand-type.<sup>41</sup>

Nevertheless, we now have positive and unquestionable evidence that the bow-drill was used by the Pueblo Indians of the Southwest.

In the collections of Field Museum of Natural History, there are a bow, drill with stone point, two fire-drills, two hearths, and two nuts or hand-pieces. The bow, drill-spindle with stone point, and a nut or hand-piece are shown in figure 1.

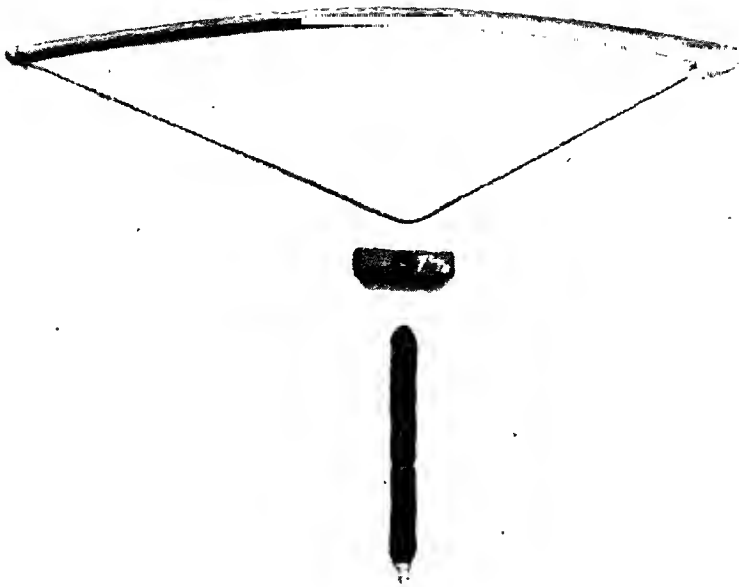


FIG. 1—Bow, drill-spindle, and handpiece from a cliff-ruin in Grand Gulch Canyon, San Juan county, Utah. Field Museum Collection.

These specimens, and others, were excavated in a cliff house in Grand Gulch canyon, San Juan county, Utah, in 1890 by Charles McLoyd and C. C. Graham of Mancos, Colorado. The Reverend C. H. Green, who had left his home in Kentucky on account of his health and taken charge of the Baptist church, Durango, Colorado, purchased these above-mentioned

<sup>41</sup> E. Nordenskiöld, *The Cliff Dwellers of the Mesa Verde*, Stockholm, 1893.

J. W. Fewkes, *Antiquities of the Mesa Verde National Park: Spruce-tree House*, BAE-B 41. *Antiquities of the Mesa Verde National Park: Cliff Palace*, BAE-B 51.

specimens and others in 1891 from McLoyd and Graham. The entire collection was exhibited at the World's Columbian Exposition in Chicago in 1893 and was later purchased by Field Museum. I showed the bow, drill, and handpiece to Dr. A. V. Kidder, who stated that in his opinion these articles were genuine and could not possibly be considered fraudulent.

It is not possible to state with any precision to what horizon these articles belong, although in all probability they may be classed as Pueblo III. However, and this is the important point, they are undoubtedly pre-Columbian and are therefore of great interest and significance. Dr. Kidder also concurs in this.

The bow is of willow, is 59 centimeters long, (measured in a straight line from end to end) and 1.2 centimeters in diameter. The bow-string consists of a two-strand yucca (probably *Y. filamentosa*) cord, twisted clockwise.

The drill-spindle, made from cottonwood, is 23.4 centimeters long, including the stone drill point, and measures 2.5 centimeters in diameter. The base of the stone drill point, which is chalcedony, is fixed in a socket, 2 centimeters deep, in the drill spindle, and is held in place by pitch gum and yucca fibre.

The nut or hand-piece, also made from cottonwood, is 8 centimeters long, 2.2 centimeters wide, and 2.5 centimeters thick. In addition to the socket seen in the illustration, there are two others in one of the other faces.

Even were the bow and hand-piece lacking, one would be forced to conclude that this drill-spindle is part of a bow-drill outfit, because of the cord-worn groove which girdles the spindle and because of the conic, well-polished crown. By a close examination of the latter, it is easy to see that it has been turned in a socket, thus polishing and pointing it. If this drill-spindle were to be used as a simple drill, twirled between the palms of the hands, there would be no string-furrow or conic crown, and the spindle would probably have to be double its present length. These same observations hold true for the fire-spindles, which were mentioned earlier.

It seems inconceivable to me that only one cliff-house village should have knowledge of this efficient tool, especially when we know that Grand Gulch canyon, Utah, is full of cliff-houses which were all built, occupied and deserted at about the same time. I do not know of any major invention which one village possessed to the exclusion of the others in the Southwestern area. It is reasonable, therefore, to assume that since a bow-drill was employed by one Pueblo unit, other Pueblos must have had knowledge of this device.

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## INTRODUCTION

THE information for the present paper was collected in the course of a field trip to the Nevada Paviotso in the summer of 1933. The reservations at Pyramid lake and Walker lake were visited as well as the Paviotso settlements at Reno, Fallon, and Yerington.

In pre-Columbian days the Paviotso occupied almost the entire north-western part of Nevada. A closely affiliated band was in Long valley and Honey Lake valley of California. This band ranged from the eastern shores of Honey lake to Pyramid lake in Nevada. Today many of them live on the reservation at Pyramid lake or in the Indian colony at Reno.

Before their confinement to the reservations, the Paviotso or Northern Paiute lived a semi-nomadic life. Fishing in Walker lake and Pyramid lake and the taking of fish from the Truckee and Walker rivers during the spawning season provided an important share of their diet. In the spring and summer the women ranged over the semi-arid hills and valleys of their habitat, gathering wild seeds and roots while the men hunted deer, antelope, rabbits and other game, or fished. In the fall the entire population moved up into the mountains for the pinenut harvest. When winter set in they settled on the shores of the lakes and along the river banks. It was during this season that the Paviotso were most sedentary. The women stayed in camp and the men hunted not more than a days journey from their winter quarters. Throughout most of the year these people ranged over the country in small groups of one or two families. They came together in large bands only for communal undertakings such as the rabbit or antelope drive or a concentrated attack on their traditional enemies, the Pitt river Indians. The big festival dances held in the spring and fall and religious dances held at the call of a messiah of the Ghost dance movements would also bring large numbers together for a short time. Shamanistic treatment of the sick would attract all the people from camps within an easy journey to the sick man's house.

Many of the old religious beliefs and practices flourish today among the Paviotso in Nevada. Shamans continue to treat the sick and those suffering from gunshot wounds. Murders motivated by a suspicion of witchcraft have occurred within the last few years. There is a feeling among most of the Paviotso, however, that shamans are no longer as powerful as they were in the old days. Many informants expressed a strong opinion that Jack Wilson, or Wovoka, the messiah of the 1890 Ghost dance movement, was the last powerful shaman. The failure of the shaman's powers

has resulted from accepting the ways of the white man, and from the lack of faith in the present generation. Even the shamans no longer have the old confidence in their powers.

#### ACQUIRING OF SHAMANISTIC POWER

"Power" which enables a shaman to cure the sick may come to a person of either sex. It is never acquired at puberty. Any mature man or woman may become a shaman. Power does not come during the period of mourning for husband, wife or child, or at the birth of a child. The power usually comes unsought, most commonly in dreams. But it may be inherited, or it may be sought through visionary experience in caves.

*Unsought dreams.*—When animals such as an eagle, owl, deer, antelope, bear, mountain sheep, or snake, come to a person a number of times in a dream, he knows that he is to become a shaman.

A man dreams that a deer, eagle, or bear comes after him. The animal tells him that he is to be a doctor. The first time a man dreams this way he does not believe it. Then he dreams that way some more and he gets the things the spirit told him to get [eagle feathers, wild tobacco, stone pipe, rattle made from the ear of a deer or from the deer's dew claws]. Then he learns to be a doctor. He learns his songs when the spirit comes and sings to him.

A person who has been visited in dreams by one of these spirits must obey the instructions given him or serious illness will result. If he continues to ignore his spirit or power he will die. After he has gathered the paraphernalia such as the tail feathers and down from the breast of the eagle, pipe, tobacco, and rattle, he places them in a bag made of deer, badger, or coyote skin.

When a man or woman is visited in dreams by one of the powers, sickness results. Often it is necessary to call in a shaman to interpret the dreams.

A man has the same dream a number of times. Then he knows the power to be a shaman is in him. Sometimes it makes him very sick. He must do what the power tells him. One man here [Reno] who is still living was sick about a year and nearly died. He went into trances and then his body was stiff as a board. He dreamed that he went to the place where the dead are. He dreamed that way all the time he was sick. He told how spirits of dead people came and tried to steal his soul. His father was a shaman and finally cured him, but he almost died.

Should a man or woman be visited by spirits in dreams and not wish to be a shaman the dreams might be disregarded for a few times, but when a shaman is called for illness resulting therefrom he will tell the dreamer to do as the power instructed him in the dream. Then if the feathers and other

parts of the shaman's kit were gotten together, recovery would be assured. If the reluctant shaman failed to use his new power in doctoring people, but guarded the eagle feathers, no harm would come to him. After a person becomes a shaman the eagle feathers, or some little object such as an odd pebble or a lead bullet with a hole in it, are regarded as the things from which the power comes. If this object is lost the shaman at once loses his power to cure people, and he will quickly sicken and die. No other shaman can help him or save him from death.

Many people have, in the course of their lives, dreams in which they have received shamanistic powers. However, if the dream comes only once or twice, no attention is paid to it. George Knerim, a full-blood Paviotso and at present the chief at Schurz on the Walker river reservation, related the following dream.

I dreamed I would be a good doctor. I was going to cure every kind of sickness. I didn't see anybody at first. There was a little hill like a peak and a trail ran all the way around it. Then people came carrying a lot of sick people. They were carrying them around the hill. They dug little holes beside the trail for the sick people. I went all the way around the hill. I went to all the sick people. I knew which kind of disease each had and I sucked it out. I sucked each one and they all got well and they stood up. I went around doing this to all of them. There were about twelve people there. I dreamed this and the next morning I told my family and they laughed. I never dreamed that way again. If I had dreamed it some more I would be a shaman now.

A shaman has power from only one spirit. By the aid of this spirit the shaman is able to diagnose the patient's illness, and the spirit through the shaman, prescribes the proper remedy. The shaman is visited by his spirit in his dreams from time to time, at which time he learns new songs or he may learn in these dreams how to cure a patient that he is about to treat.

In addition to the shamans who derive their powers from animals or birds, there are shamans who are visited in their dreams by the mythical beings living in the lakes and water holes and spoken of as "water babies." They are instructed in the same way as the other shamans and the water babies give them the songs that they are to use in curing.

When anyone speaks skeptically of the water babies or makes fun of them, they are sure to hear and make the offender ill. Only a shaman with power obtained from the babies can cure such a case. The shaman is called in to treat the offender and he learns from his power what must be done to bring about recovery. In addition these shamans can treat other kinds of sickness.

*Inheritance of power.*—Some shamans inherit their power from a deceased father, mother, aunt or uncle, or grandparent. The dead relative visits them in dreams and tells the dreamer that he or she is to take the power and become a shaman. After a few such visits and instructions from the deceased, the power itself appears in the dreams, and the relative no longer comes. The power then belongs to the dreamer. Rosie Plummer, a woman about fifty years old living on the Walker river reservation, acquired her power from her father five years ago. He in turn got his power from his brother. She gave the following account.

When my uncle was dying he told my father to take the power so he could cure sick people. The next day my uncle died. He told my father to dream about the power and get instructions that way. The next night he dreamed about it and my uncle came to him. He came every night in dreams. Each time he came a different way. My father didn't like it. He was afraid that his brother was trying to get him away. He buried the little piece of lead with a hole in the center filled with eagle down that my uncle gave him when he died, and the spirit didn't bother him any more. That was my uncle's power. After that my father was a strong shaman. He could catch rattlesnakes and they didn't bite him. His brother told him to do that. He was told to put sage brush in each nostril and the snake wouldn't hurt him.

Then rattlesnake came to him in dreams and told him how to cure snake bites. He was told to catch rattlesnakes and take out two fangs until he had ten, and to get ten stone beads the color of rattlesnake eyes. He made a string of beads with the stones and fangs to use in curing people bitten by rattlesnakes. He could treat other sickness as well.

One time he was going to Fallon when a rattlesnake bit his horse. He took the snake away and put white paint around the bite and sang. The horse was all right after that. That was the only time he used his power to cure snake bites. He could do the same thing for people if he wanted to.

Sometimes my father would catch rattlesnakes and put them around his waist next to the skin. He used to ride home with rattlesnakes that way. One time he put a rattlesnake on me and he told me not to move. The snake crawled all over me but it didn't bite. He had rattlesnakes with him all the time.

When Rosie's father had been dead about eighteen years she started to dream about him. She dreamed that he came to her and told her to be a shaman. Then a rattlesnake came to her in dreams and told her to get eagle feathers, white paint, wild tobacco. The snake gave her the songs that she sings when she is curing. The snake appeared three or four times before she believed that she would be a shaman. Now she dreams about the rattlesnake quite frequently and she learns new songs and is told how to cure sick people in this way.

Shamanistic power is not always transferred by inheritance. Several informants spoke of a parent or a grandparent who had been a shaman and added, "I am supposed to get some power but I have never dreamed about it so I am not a shaman."

Some of the Paviotso believed that the power inherited from a relative is not as strong as it was when the original shaman possessed it. The following was related at Pyramid lake.

If a shaman has a daughter she will turn into a shaman. She will be a weaker shaman than her father. Her father's spirit comes to her and tells her to fix eagle feathers and put them away. Then she goes to sleep and she hears songs coming from the east. The songs come from where the night comes. She hears them far off at first and then they are louder. After a while she can hear the song clearly. Then her power tells her to be a shaman.

A younger man may learn to be a shaman from his father while the parent is still alive.

Sometimes a man will get his power from his father. A father will tell his son to be a shaman. The son will start to dream and go into trances. His father tells him that he will be a shaman some day. The son dreams for a long time and then the father teaches him to cure sick people. He never learns this when he is a boy. He must be a man. Both father and son may be shamans at the same time.

*Power quest.*—In the Paviotso territory there are a number of caves where shamanistic power is sought. About eight such places are known to the people today. Perhaps formerly there were others whose locations are now unknown. Only men usually seek power in the caves according to the male informants, but Rosie Plummer insisted that women also could become shamans in the same way. The person who goes to one of these caves must be brave, for all sorts of terrible noises are heard and if one were to run away the quest for power would fail.

No fasting nor any sort of preparation is made before visiting a cave in search of shamanistic power. A man goes to a cave in the late afternoon or evening. When he gets there he announces or thinks about the power that he wants. He must sleep in the cave for the night. During the night he is told in a vision or in a dream what he has to do to become a shaman. Songs may be given to him at this time or they may be learned in subsequent dreams.

The following account of a visit to one of these caves was related by Dick Mahwee, a middle-aged shaman on the Pyramid lake reservation.

There is a mountain below Dayton [Nevada]. Men go to the cave on this mountain to get power. Women never go into this cave. They get their power in dreams. I went there when I was about twenty-five. I stayed in the cave all night. When I

got inside I said what I wanted. I said I wanted to be a shaman and cure sick people. I lay down on the floor and then I heard lots of different animals going through the cave. They would say "Somebody is here." The animals do that to see if a man is brave. They try to make him run out of the cave. Then I heard lots of noises. After a while I heard people singing and dancing. Then the chief talked to the people who were singing and dancing. I listened to this for a long time and then I felt as if I were in a daze. I could hear two chiefs at the dance talking back and forth. Then down at the bottom of the cliff I could see a man. He was very sick. A shaman was singing for him and doctoring him. I heard the songs of the shaman. A woman with a wet sage brush branch in her hand was dancing. She went around the fire jumping. Every time she jumped she said, "Hū!" The sick man was getting worse. I could hear him groan. The shaman sang some more and then he started to weep. Then all the people wept and wailed. The shaman didn't sing any more and all the people were crying. It was past midnight now. The people mourned until daylight and then they stopped. I was lying on a rock and it started to crack like breaking ice. Then a tall slender man stood in front of me. He said, "You want to be a shaman. You must do as I tell you. First get your eagle feathers and do what I tell you with them. You have chosen this and it may be hard for you. The feather is to guide you. You can bring the souls of dead people back with it. Do that, otherwise you will have a hard time. At the bottom of this cliff there is some water. Bathe in it and paint yourself with white paint. Don't be impatient but wait for my instructions." I did what he told me and I learned my songs and how to cure the sick when this tall man came to me in dreams. He helps me doctor people and tells me what to do.

A man may go to one of these caves to secure luck in gambling, ability to be a good hunter, or invulnerability against arrow or bullet wounds. In any case a man coming to the cave must state what he wishes and then bravely face the ordeal of staying all night in spite of the terrifying noises. To do so assures the success of the quest, while to leave before morning means that the seeker receives no power.

If a man wants to be a hunter he goes to the cave near Dayton. He shoots arrows at the cliff and then he goes into the cave. He announces what he wants. He says he wants to be a good hunter. He has to stay there all night. He must sleep in the cave. A tall slender man comes to him during the night and tells him what to do. The tall man tells him to go across the river at the foot of the mountain. He has to hunt a kangaroo rat. When he kills the rat he must eat it. That will make him a good hunter because the rat has the power of all the fur animals.

When a man wants to be a gambler he sees during the night in the cave many gamblers playing. He sees that he wins the entire world. He can see which side the sticks are on in the hand game. While this man is in the cave he is told to fix a pointed bone for the hand game. He is to keep it always at his side. Then he can see through anything That makes him lucky.



While the shamans who doctor are visited in their dreams by their spirits or can call on them to help in the curing, the men who have supernatural power in hunting, gambling, or warfare appear not to receive further visits from the power. The Paviotso think of those spirits as watching over the warrior, hunter, or gambler, and helping the man through supernatural power to surpass his tribesmen or enemies or overcome the environment. These powers in all cases are looked upon by the Paviotso as spirits which guard and help the possessor.

#### SHAMANISTIC DOCTORING

There are no public performances in which to give the novice shaman an opportunity to demonstrate his power. Nor is there ever a public contest between shamans to demonstrate their powers. When the shaman has been commanded by his power to doctor people he tells his neighbors about his dreams and songs so "They will know he is ready to doctor sick people."

Not all shamans can go into a trance. Only the best and strongest doctors have this power. While in a trance the shaman goes to consult his power. There he learns how to cure the patient. A doctor who does not go into a trance is thought to call his power to help him in curing. The latter class of shamans are thought to be weaker and less likely to bring about a cure. Today, of the ten or more Paviotso shamans there is but one who goes into a trance while doctoring. At present he is hiding from his tribesmen because he is charged with practising witchcraft and numerous threats have been made against his life.

*Interpreters.*—Every shaman has an interpreter when he doctors. The interpreter repeats the words of the shaman so everyone can hear. During the doctoring performance the shaman mumbles, talks in snatches, or talks so rapidly that the people cannot understand him. The function of the interpreter is to make the shaman's words intelligible to the audience. The shaman does not use an archaic or esoteric language. He may always use the same interpreter. "The interpreter gets used to hearing the shaman talk and can understand him. He knows the shaman's songs."

*Typical doctoring*—The relatives of the sick person go to the shaman early in morning about sunrise. If he agrees to doctor for them he takes one of his eagle feathers and ties it to a willow stick about four feet long. The stick may be smeared with white or red paint. The relatives take the willow stick with the feather home and place it upright on the ground outside the house, about twenty feet from the patient's head. It is left there all day. "It keeps the bad spirits away." The patient is always laid with

his head toward the south. Doctoring takes place usually at night unless someone is very sick or, in an emergency, such as a gunshot wound or snake-bite.

About sunset the stick is moved inside the house and stuck in the ground at the head of the patient, who is placed on the west side of the fire. The door is always on the east side. Before dark the shaman comes with his kit, consisting of eagle feathers, eagle down, wild tobacco, stone pipe, and beads. He takes off his shoes and hat. In the old days a breech-clout was the only clothing worn by the shaman while doctoring. He squats beside the sick person and smokes his pipe for a few minutes. He may give instructions that all the people in the audience are to paint their faces with white. He tells them which design to use, such as two short parallel horizontal bars on each cheek. This paint is worn all night. Then he starts to sing and the interpreter joins in the song. As soon as the people in the audience catch on to the song they help the shaman sing. Then he walks around the fire counter-clockwise. "It is bad if he walks in the other direction or passes the pipe around the fire clockwise." The shaman's power tells him how many times he should go around the fire. The shaman then stops near the patient and sucks the wound or the place where the pain is felt. All the people continue to sing while the shaman is sucking. When he gets up they stop singing. He spits on the ground. "A good doctor spits out blood each time he sucks the patient." Then he starts a new song and walks around the fire again and the sucking process is repeated. This goes on for the number of times stipulated by the shaman's power. Finally he stops, sits by the patient and lights his pipe. The pipe is passed around the fire counter-clockwise. Each person present takes one puff and passes it on to the next. Then the shaman sings and walks around the fire some more. If he is a shaman who goes into a trance this takes place usually about this time. Now he walks as if he were drunk. He tells three or four men to catch him as he starts to fall and to lay him on the ground. They are told that when he starts to moan, and sing, and foam at the mouth that he is coming back from the spirit world. They should bend his arms and legs and pass the willow stick with the eagle feather over his body. The shaman may stay in the trance from half an hour to two hours. While he is in this condition there is no singing. Everyone is very quiet. When he comes back he tells the people, through the interpreter, what has caused the patient to be sick and what must be done to bring about a cure. Then he sings some more and sucks the patient again. The shaman may show the audience when he comes out of the trance, some little object which he claims caused the illness.

The shaman gets up after he comes out of the trance. He tells the people that

he sucked the disease out. He tells them that it hurt him and he went way up in the sky. Then he spits out something small, like a bug. He claims he sucked it out of the patient. Sometimes it looks like a small stone or a worm.

When a man dies the shaman goes after him. If he can find the soul he brings it back and the man is all right. When the soul gets too far away, the shaman cannot find it and the man never gets well.

Then the shaman tells the people to put white paint on the patient or to bathe him by sprinkling water over him with a green sage brush shoot.

About midnight the doctor stops singing and food is provided for all, by the family of the sick person. After all have eaten the doctor resumes singing and again sucks the patient. This continues until daylight.

A shaman usually doctors for two nights but if the patient is much better after the first night the singing may be discontinued. The relatives of the sick person may call in another doctor for the second night if they are not satisfied with the first shaman. If one shaman cannot help the patient they call in another. No harm comes to a doctor who cannot cure the sick, but after a few failures his power is thought to have deserted him and he is no longer asked to sing for people.

*Examples of cure.*—I [Henry William] went to a doctoring in Smith valley "Little Dickey" was the shaman there. He was singing for his own daughter. The mother thought the girl was dead. She cried. The doctor told her to stop crying so he could bring the girl back. He had a little bullet-shaped thing like lead that his power gave him. He put it in the girl's hand and closed her hand tightly. Then he said, "I am going to sing five songs." He walked around the fire twice while he sang each song. Then "Little Dickey" announced, "I can feel her coming back through the hole in the lead. It is coming nice and cool now." People then felt a wind start blowing. The girl opened her eyes and the shaman told them to give her some water. He started another song and sang until morning. "Little Dickey" lost the piece of lead after that. He never found it again. He died very soon. Nothing could help him.

Daisy Lopez [in Schurz] was dead a whole day when she was a baby. A shaman came and sang for her. He sang all afternoon. He went into a trance and brought her back. He found her loitering among the flowers on the way to the land of the dead. Everything was tempting her and she didn't go on the way to the dead very quickly. That is why the shaman could catch up with her and bring her back. When he came back with her about sunset we heard a low moaning first. Then the moaning got louder and louder as she got closer. Pretty soon the doctor came out of the trance and started to sing. Daisy was all right after that.

*Doctoring snake bites.*—A shaman with power from rattlesnakes tells one who has been bitten by a snake not to eat for five days. If he eats anything he will die at once. The doctor puts white paint around the bite. Then he squeezes out the blood.

He sings and sucks the bite. At the end of five days he does the same thing. Then the patient is all right.

*Payment of fees.*—Both the shaman and interpreter were paid by the sick person or his relatives. Nowadays the shaman receives about five dollars for each night and the interpreter two or three dollars. In the old days both were paid with skins, moccasins, or beads. The fee that a shaman asks is set by his power. If he asks more or less than his power instructs harm will come to him. He will sicken and no longer be able to doctor.

About five years ago a lot of the doctors started to charge fifteen or twenty dollars to sing for people. They tried to make a lot of money. Their powers got angry. Many of them were very sick.

Informants did not agree that the shaman returned the fee in case he was not successful in curing the patient. Some said that he was expected to return the fee if the patient died or failed to get better, while others stated that he could do so if he wanted. "People liked him better if he returned the money." It was insisted that frequently the shaman refused to give back the fee.

Failure to obey the instructions of the shaman when he is doctoring a sick person results in harm for both the patient and the shaman. If the relatives do not paint the patient just as the doctor tells them or if any of his instructions are disregarded there will be no recovery and in addition the shaman will sicken and lose his power.

Pete Powell was doctoring in Yerington. People did not do what he told them. Ever since he has been paralyzed. He can't talk anymore and he is always sick. He doesn't doctor anymore. I guess he has no more power. When he doctored he didn't go into a trance.

Menstruating women are not allowed to be present at a doctoring. If a woman in that condition comes when a shaman is singing he detects it at once.

A shaman finds it out at once. His voice gets hoarse when he tries to sing. Then he tells her to get some red paint. He makes a circle around the fire with it and makes the woman paint herself. Then she has to leave.

*Specialists.*—Most shamans were credited with the power to treat any kind of disease. However, some doctors were supposed to be especially good in curing certain things. Jack Wilson was an excellent doctor for gunshot wounds. Those with power from rattlesnakes could cure people who had been bitten by snakes better than other shamans. Formerly there were Paviotso shamans to whom were ascribed strong powers for curing the wounds made by poisoned arrows.

There was a shaman, Tom King, who got his power from deer. He could suck out arrow heads. One day the women were gathering seeds in the desert. They were cutting the plants and putting them in piles. One woman stole some from another woman's pile. They started to fight. Then the men got to quarrelling. They shot each other with poisoned arrows. The shaman came along and found them fighting. He told them to stop. He said, "That is nothing to play with." Then he got the wounded together. Some were dying. He doctored all of them. He sang and sucked the wounds. That was the way he sucked out all the poison. None of them died.

Some shamans were given credit for being the best doctors for certain diseases. Usually this is felt to be due to the strength of the shaman's power.

*Weather shamans.*—The strongest shamans are thought to have power over the weather. Weather control is never invoked by shamans to bring about desired conditions. Their control over wind and rain is exercised in order to demonstrate their supernatural power. It is the only occasion on which the shaman uses his power purely for purposes of exhibition.

Jack Wilson could bring rain. At Sweetwater [Nevada], five Sioux came to see him. As soon as they arrived he took a magpie-tail feather from his hat. He waved it in front of his face. Right away the clouds came up in the sky. Rain started to fall. When Jack stopped waving the feather the clouds went away.

Only the strongest shamans of either sex are thought to have the power of weather control.

*Antelope doctors.*—One of the chief Paviotso communal undertakings was the antelope drive. A corral was built of brush, the rope being made from the bark of the sage brush. The night before the day on which the drive was to take place, a dance was held under the direction of the antelope shaman. The purpose was to charm the antelope so they would walk into the enclosure in a docile manner.

The night before the antelope drive the shaman talked to the people. He told them to dance. He told them what to do. He made all the pregnant women and those having their menses go away. He told the men not to have any intercourse with their wives that night. If anyone wanted to urinate during the night they had to go inside the corral. He told them that if anyone lost anything that night, there would be a weak place in the fence and the antelope might break through.

The shaman started to sing. He told the people to dance. After which he went into a trance. That was when his spirit went to look for the antelope herd. When he came out of the trance he had antelope hair in his hand. That showed the people that he had the antelope in his power. He sang and the people danced almost all night. One man made music by rubbing an arrow over his bow-string like a violin. Another man used a notched stick to make music.

The antelope doctor got his power from the antelope. He had eagle feathers that he put under his head when he slept. His power told him everything. He got his songs from the eagle feathers. The antelope doctor didn't cure sick people. I [Joe Green] saw an antelope shaman at Stillwater. My mother told me about one who was at Pyramid lake.

*Invulnerability.*—The shamans with the strongest powers were thought to be invulnerable against bullets or arrows. As with weather control, this power was exercised to demonstrate the strength of the shaman. Frank Spencer, one of the messiahs of the 1870 Ghost dance, who later acquired strong powers for curing sickness, was supposed to be invulnerable when fired upon with a gun.

Spencer doctored a sick girl but she didn't get well. Her parents called in another shaman. He said Spencer poisoned the girl [through witchcraft]. The girl's father went after Spencer. He came to the place where Spencer was camping. Spencer was asleep. The man shot him three times but the bullets didn't hurt him. Then Spencer got up and the man shot him again but he didn't feel it. Spencer invited the man to come into the house. They talked for a while. Spencer told the father that he had not poisoned the girl. He said that perhaps the other doctor had fooled him. Then he told the man that no one could hurt him with bullets or knives. Spencer told him to forget about the shooting. They shook hands and were friends after that.

Spencer was at Lovelock [Nevada]. He lost something. It made him sick. He took a bullet and marked it with his teeth. He gave it to a man and told the man to shoot him with it. Spencer took off his shirt and drew a circle on his chest with red paint. The man stood about fifty feet from Spencer. He shot at the circle on Spencer's chest. When he fired it sounded different. The noise was not very loud. Spencer had no wound on his chest. He stood there for a few minutes. Then he coughed and he spit the bullet out in his hand. He showed the people the teeth marks that he had made on the bullet before the man shot at him. Spencer felt better after that. Lots of people were standing around to watch him.

*Clairvoyance.*—In the old days some of the shamans had the power to prophesy the outcome of battles, the appearance of epidemics, or other important events. Other shamans could locate lost or stolen property.

My father [Billy Roberts, Pyramid lake] was a shaman. He could find things that had been lost or stolen. People paid him to do this. A man would come to my father and say that he had lost something. My father would tell him to come back the next day. He always had to sleep first. That night his power came to him and told him where the lost property was. If it had been stolen, his power told him who was the thief. Shamans cannot find things for people nowadays because they have'n't strong enough power anymore.

"Doctor Dick" could find things for people. One time a man buried some money. He couldn't find where he put it. He hired "Doctor Dick" to find it for him. That

night "Doctor Dick" went into a trance. In the morning he went with the man and showed him where the money was buried.

Several informants stated that the coming of the white man in Paviotso country was foretold by shamans. The following story was related by Nick Dowington, a Paviotso, now about eighty years old.

There was a shaman at Pyramid lake called Toiyap. The People were in the hills west of the lake, gathering seeds. Toiyap felt something coming to him. He was singing loudly. He told his brother-in-law to get all the people together. They built a big bonfire. Then he went into a trance and lay by the fire. When he came out of the trance he told them what he had seen. He said that people were coming who had white skins and hair on their faces. He said these people had white mountain sheep with big ears. He meant horses[?]. He told them these people were coming. This happened thirty years [?] before any white people came here.

#### WITCHCRAFT

Poisoning by shamans who practice witchcraft is considered by the Paviotso to be a common source of illness. Usually the shaman simply wishes, or dreams that someone will be ill and his power then causes the sickness. Some of the Paviotso believe that a witchdoctor gets his power from the bear.

Sometimes a sick man dreams that a person who looks like a bear comes to him. Then he knows that a shaman with power from a bear poisoned him. This is the strongest power. Even a good doctor cannot cure him.

A bad shaman wishes sickness on people. He thinks about it and the person gets sick. He might wish a lizard or snake to go into someone and that causes sickness. He does not catch a lizard to use in poisoning people. He only thinks about it and then it comes true. A good shaman can suck out the lizard and then the patient gets well.

Sometimes shamans try to poison each other. That is why so many doctors have died. The weaker doctors were all killed by shamans with stronger power.

Another way to make a person sick was for the shaman to give his victim food. When a bad shaman wants the person to be sick he wishes it when he gives the food. Then the one who eats gets sick and dies. Sometimes a bad shaman will touch someone and wish for sickness. Then that person will get sick right away.

Cast-off clothing, nail parings, hair and other personal objects are never used in witchcraft.

Sickness resulting from witchcraft is treated in the same way as other illness. A shaman is called and he learns from his power, not only how to treat the patient, but also who caused the illness. then the family of the patient revenge themselves on the shaman who practiced witchcraft. If

a shaman becomes notorious for causing illness the entire community sets out to exterminate the common danger.

There was a big dance at Hawthorne [Nevada]. A shaman was there, who had made many people sick. This time he made lots of rattle snakes come. The people could hear the snakes all around the dance grounds. The chief talked to the people. He told them to kill the shaman. They went over to his camp and asked his relatives to give him up. The relatives were afraid. They told the people where he was. About a hundred people helped kill him. Then the snakes went away.

A shaman killed on account of practising witchcraft is buried in the usual way.

#### MISCELLANEOUS

Shamans were buried in the manner usual for any Paviotso. His feathers, pipe, rattle, and skin pouch were buried with him. To keep any part of the doctor's paraphernalia would result in dream-visits from the spirit of the deceased shaman. The dreamer would be afraid that the shaman's ghost was trying to take him to the land of the dead. The visits would cease with the burial of the dead shaman's property.

It is believed that the weather changes when a shaman dies.

When a shaman from Bishop was killed here [Schurz] for witchcraft, black clouds came up all around. The sun got yellow and it was cold. It always gets cloudy and sometimes the snow falls when a doctor dies.

The shaman's songs are, as has been stated, learned in dreams. They always consist of two or three words which are repeated over and over again, and often refer to the source of the shaman's power.

The Paviotso believe in the efficacy of shamans from other tribes. A shaman from Mono lake was much in vogue on the Walker river reservation until he was killed for practising witchcraft. Years ago a Ute shaman, visiting the same reservation, was often called into treat the sick.

The presence of a menstruating woman brings harm to a shaman only when she is present at a doctoring. At any other time he can freely associate with such women.

The presence of a shaman was not felt to be dangerous, nor was it necessary to avoid his glance.

#### SUMMARY

Among the features of comparative interest in Paviotso shamanism are the different ways in which supernatural power may be acquired. Lowie noted inheritance of shamanistic power and the dream quest in the cave



as well as powers visiting the shaman unsought.<sup>1</sup> Steward in his account of the Owens Valley Paiute denies the inheritance of the shaman's power.<sup>2</sup> Powers seem to have been transmitted by inheritance among the Surprise Valley Paiute according to Kelly.<sup>3</sup>

Unlike the Paviotso shamans who acquired their powers only at maturity, the shamans of Owens valley and Surprise valley derived their powers from dreams which frequently began in early childhood.<sup>4</sup>

Among the Nevada Paviotso the interpreter is a necessary functionary in shamanistic performances; in the account of the Owens valley he is only mentioned in connection with a curing officiated by a Shoshoni doctor, while among the Surprise valley people the interpreter only infrequently played a rôle in the curing ceremony.<sup>5</sup>

The gift of prophesy within the power of the Paviotso shaman is corroborated by Sarah Winnemucca Hopkins<sup>6</sup> and is mentioned for the Surprise Valley Paiute.<sup>7</sup>

The ability of Paviotso shamans to go into a trance and bring back the soul and restore a patient to life, as well as to cure by extraction, is confirmed by Lowie.<sup>8</sup> The shamans of Owens valley and Surprise valley are credited with similar powers.<sup>9</sup>

The power of charming antelopes in the antelope drive is described in detail by Sarah Winnemucca and is also known among the Surprise Valley Paiute.<sup>10</sup>

It is of interest to note that the Paviotso shaman's kit which he used in the curing ceremony and which consisted of eagle feathers, pipe, tobacco, beads, deer-hoof, rattle, and white paint<sup>11</sup> is substantially similar to that employed in doctoring among the Surprise Valley Paiute and the Owens Valley people.<sup>12</sup>

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<sup>1</sup> Robert H. Lowie, *Notes on Shoshonean Ethnography*, AMNH-AP 10, pt. 3: 294.

<sup>2</sup> Julian H. Steward, *Ethnography of the Owens Valley Paiute*, UC-PAAE 33, no. 3: 311.

<sup>3</sup> Isabel T. Kelley, *Ethnography of the Surprise Valley Paiute*, UC-PAAE 31, no. 3: 191.

<sup>4</sup> Steward, 312; Kelly, 190.

<sup>5</sup> Steward, 315; Kelly, 189-195.

<sup>6</sup> Sarah Winnemucca Hopkins, *Life Among the Piutes: Their Wrongs and Claims*, 15f. New York, 1883.

<sup>7</sup> Kelly, 189.

<sup>8</sup> Lowie, 295.

<sup>9</sup> Steward, 314 f.; Kelly 195.

<sup>10</sup> Hopkins, 55 f.; Kelly, 189.

<sup>11</sup> Lowie, 294.

<sup>12</sup> Kelly, 191; Steward, 313 f.

Weather shamans and specialists have been described above for the Nevada Paviotso but they were unknown among the Owens Valley Paiute, while little specialization was recognized in Surprise valley.<sup>13</sup>

The Paviotso shaman's invulnerability against bullets and arrows was practised among the Owens Valley Paiute, as among the Nevada Paiute, to demonstrate the "doctor's" powers.<sup>14</sup> This practice may be connected with the Ghost dance movements.

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<sup>13</sup> Steward, 311; Kelly, 189.

<sup>14</sup> Steward, 310.

## BOOK REVIEWS

### METHODS AND PRINCIPLES

*History, Psychology, and Culture.* ALEXANDER GOLDENWEISER. (XII, 475, XII pp. New York: Alfred A. Knopf, 1933.)

This collection of essays, covering the author's "cumulative contribution during a score of years to . . . social theory" (p. vii) defies adequate notice. The initial paper, from which the volume takes its title, suggests the predominance of theory. Parts Five and Six might have been omitted: no new discoveries warrant reconsideration of the race problem for an audience of scholars, and the *obiter dicta* on feminine psychology, Freud, and the newer education are admittedly out of keeping with the rest of the book. On the other hand, all will be grateful for a chance to turn readily to the discussions of convergence and totemism, not to mention several otherwise inaccessible critiques of Wundt and others, all of which form a significant part of anthropological thinking during the period to which they belong.

For a rapid orientation as to Dr. Goldenweiser's position the three essays on "Psychology and Culture" (pp. 59-67), "Anthropology and Psychology" (pp. 71-86), and "Cultural Anthropology" (pp. 121-164) are especially serviceable. The appraisal of the Boas school (pp. 152-157) may be profitably compared with Dr. Radin's recent joust against its members, the guide to Boas's theoretically most illuminating papers (p. 154) being especially useful for students.

Oddly enough, the author, though discussing relevant categories with great acumen, sometimes uses the word "historical" with bewildering eclecticism. Thus, the culture area concept is presented as a concrete embodiment of the "historical standpoint" (p. 154). Manifestly it is a spatial not a temporal concept and can be used equally well by purely descriptive ethnographers and by propounders of historical schemes. Nor can I understand why *psychological* methods are made to characterize a *historical* school (p. 157). To enumerate the points of view expressed by the heterogeneous assemblage of minds that have at one time or another enjoyed contact with Professor Boas may be a meritorious enterprise; but it is not defining "the historical standpoint" or the aims of an "American school of historical ethnology."

With Dr. Goldenweiser's insistence on the study of the subjective attitudes of the culture-bearers in addition to the external course of culture history I am in complete accord; they are clearly an essential part of ethnographic investigation. But the recurrent emphasis on "psychological" methods, postulates, settings, and what not, in this particular sense is jarring. When the point has once been made, nothing further remains to be said about it. There is only *one* fruitful way of connecting anthropology with psychology,—through the harnessing of *scientific* psychology for the more accurate definition and ultimate illumination of ethnographic data. Boas's, Kroeber's, Spier's, Wissler's concern with motor activities of primitive tribes, my own attempts to apply the principle of individual differences and Fechner's ideas on

experimental aesthetics, are steps in this direction; and every clinical discovery bearing on "visionary" experiences potentially adds to an understanding of our facts. Who can write intelligently about the Bronze Age without knowing how bronze is related to copper? So, if we are to write with the maximum of effectiveness on religious and aesthetic phenomena, we cannot use "visions" or "symbols" as meaningless counters but must keep abreast of what a science of mind has to offer about them. *There* lies the promise of an inexhaustible harvest, while a tilt against cultural behaviorism is an attempt to batter down wide-open gates.

When Dr. Goldenweiser clamors for "psychology," he is of course demanding a mixture of philosophy and art. Consistently with this attitude he writes that "nowhere is the impending deepening of the psychological approach foreshadowed more significantly than in some contributions by Edward Sapir. . . . These ideas of Sapir's . . . open up vistas of psychological analysis on a much higher level of insight and refinement than has hitherto been customary in anthropological literature" (p. 162 f).

The papers referred to are Sapir's essays on "Culture. Genuine and Spurious" and "Culture in New Countries." But these stimulating contributions to *philosophy* explicitly set aside the accepted technical definition of "culture"; they deliberately introduce a notion of values extraneous to our science except as an observational datum; and they do not, so far as I can see, apply "psychological" principles known to psychologists. Philosophy may be on a much higher level than a particular branch of learning, but it is necessary to keep them apart.

Ominously enough, the section quoted from—"Recent Tendencies and Future Vistas" (pp. 157-164)—is framed by romantic utterances about the enthrallment of creativeness by methodological safeguards and the "incipient liberation of American ethnology from its methodological bondage." Isn't it too bad that games must be played according to the rules? Alas! in that difficult pastime of discovering how things really are, there is no advantage in butting reality below the belt—we merely get knocked on the head. *Sapientia sal.*

But the philosophical bias has its positive side; and in the insistent probing of ethnological concepts lies Dr. Goldenweiser's very real contribution. No one, it seems to me, has more clearly set forth the problem of several coexisting factors determining marriage (p. 273 *et seq.*). His discussion is not one of dialectic subtleties, but touches the very core of the question. In this context we must lament the failure to reprint the all too "summary reports" of the author's researches on the Iroquois. It might have been worth while to remind his readers that he has seen Indians in the flesh. Apart from that, this field work resulted in Dr. Goldenweiser's sharp distinction between the clan and what we now call a "lineage" (Gifford)—an idea amply vindicated by subsequent inquiry.

Dr. Goldenweiser is an acute and accomplished writer; I do not know his superior among the liaison officers of the social sciences.

An atrocity that should be expunged in later editions is the confusion of Alexander and Wilhelm von Humboldt (pp. 124, 466).

ROBERT H. LOWIE

*The Method and Theory of Ethnology.* PAUL RADIN. (\$2.50. New York: McGraw-Hill Book Co., 1933.)

Mr. Radin, to my mind, somewhat resembles a Don Quixote tilting against the wind-mills; but, tilt he never so gallantly, I fear that the sails of the latter will continue to revolve in their own sweet way, so long as the spirit of Man bloweth where it listeth. He takes all the students of ethnology, but more especially those of his contemporaries who are nearest to him in age, to task for their shortcomings in the way of method; and one can but hope that at the Last Judgment, when books and their makers are alike cast into the scales, this unfortunate crowd (of which the fringe includes myself) will get off with lighter sentences. I must confess, however, to having thoroughly enjoyed the vigorous and frank tirade, even if it argue a certain insensitiveness on my part that my withers should remain unwrung. The more criticism the better for the progress of any science; and, though a discussion of methods in the abstract always strikes me as about as deadly as a piece of stage-fighting, it is doubtless good for us all to take and give account of our several propensities and plans of research with a view to closer cooperation; though in England, where we have a weakness for preserving our amateur status, we shall always be inclined to hoe each his own path, leaving communal agriculture to our more completely socialized neighbors.

The trouble begins with the word 'Ethnology,' which for Mr. Radin represents his science in its entirety; whereas, according to our Oxford usage, we are students of 'Anthropology' in its physical and cultural aspects taken together, our purpose being 'ethnological' just in so far as our results of whatever kind are meant to explain the formation and distribution of ethnic groups or societies in the plural. Again, while Mr. Radin confines his ethnology to the study of the culture—and only the culture—of aboriginal peoples, we as anthropologists proudly claim mankind in general as our object of enquiry, and, as for 'aboriginal,' over here our peers would like to be thought as antediluvian in ancestry as our peasants. In the United States it may be comparatively easy to draw a line between native Indians and intrusive whites—though culturally speaking, the position of the Negro is awkwardly intermediate; but in Europe history, proto-history and pre-history take us backwards and ever backwards with a more or less unbroken continuity, and there are no reservations, spatial or temporal, within which the specialized labors of a student of the primitive—whatever that be—can be confined on the understanding that odious comparisons are not to be extended to our noble selves.

At this point Mr. Radin would doubtless retort: How with so indeterminate a subject is any exactness of scientific method to be attained? Quite so, and no reasonable person would contend that anthropology, as pursued for the last three-quarters of a century has yielded much, in the way of general as contrasted with particular truths, that we can be said to know with a high degree of certainty. Indeed, the biological sciences in general are inferior in this respect to the physical; and it may be that their only chance of turning the tables on the latter is to interpret life in terms of mind, and mind in terms of its most complex form, the human intelligence,

so that what we can understand by approximation may nevertheless be rated as even so more worthy of attention in so far as it belongs to a higher grade of importance for human thought as a whole. Humanity will be more concerned to acquire imperfect knowledge, so long as it is the best attainable, about the development of big and vital things such as religion, or morals, or law, than to provide itself with the most exhaustive information, however qualitatively superior in itself, about the private life of that "well-known Winnebago named Dog-Head" or that "even more famous Winnebago named Large-Walker." By all means let the maker of bricks make them as soundly as he can; but I cannot see how the criteria of his relatively humble handicraft can be applied offhand to the disparagement of the architect's design. Mr. Radin seems to argue that you can only spoil a stack of nicely finished bricks by trying to make a cathedral out of them.

Perhaps, however, I speak bitterly, because I am classed, in honorable association with Sir James Frazer, as a 'professional theorist,' and I note that Mr. Radin seems regularly to equate 'speculative' with 'futile.' As a matter of fact, I am a professional, that is, paid, educator of youth, including young men destined to preside over the destinies of peoples of very various phases of culture up and down the British Empire. With many of my pupils, then, and hence partly with me also, it is a practical question, a matter of 'applied' anthropology, how general rules can be framed for dealing justly and sympathetically with all sorts and conditions of men. Such rules are in actual use, and it is a question of using such science as is available to make them as salutary as possible for all concerned. Standing back, however, from all such considerations of policy, one is led on to try to classify these varieties of human experience on a world-wide basis, and from typology one proceeds to explore their genetic relations—primarily a matter of chronology, though ultimately one may hope to arrive at generalized sequences as between types. In all this constructive theory one has to do justice alike to external conditions and to motives, and individual thinkers will doubtless come to the work with one kind of bias or another such as a critic may do good service to the thinkers themselves by pointing out. Whether, however, they incline towards a materialistic interpretation of history, or lay chief stress on spiritual forces, is no reason for ticketing them 'scientific,' 'historical,' or what not, seeing that they are doing their best to be both at once. In short, labels are libels. Mr. Radin's short-hand descriptions of my colleagues reveal to me very little about any of them—except Mr. Radin.

Yet of positive good I have got not a little from the book—mostly bearing on what I should call, not ethnology, but rather ethnography. But to know the language of the folk thoroughly, set down the very words of representative individuals, treat them not as savages but simply as other people, and so on—all these are golden precepts, and Mr. Radin's own excellent field-work shows with what advantage they can be followed. Also, I find it useful to learn from a man of such wide reading the names of so many authorities from all parts of the world whom he would select for special mention. As for their respective merits or demerits, however, I find it easier for the most part to discover what he thinks about them than why he thinks it.

Yet, take it all in all, it is a stimulating book, a challenge to every one of us whose interests do not stop short at the civilized mind of man to be a little more self-conscious about our working principles. Indeed, a well-developed methodological conscience is a beautiful thing; and I only wish that I had one.

R. R. MARETT

*Methods in Sociology A Critical Study.* CHARLES A. ELLWOOD, with an Introduction by HOWARD E. JENSEN. (xxxiv, 214 pp., \$1.50. Durham, North Carolina: Duke University Press, 1933.)

Professor Ellwood summarizes in this book his reflections on the fundamental procedures in sociology and other social sciences. Behaviorism, the scientific method, and the statistical method are considered. There is a chapter on "Sociology, History, Economics, and Cultural Anthropology," in which the author links cultural anthropology with sociology.

Indeed, it is impossible to say where cultural anthropology leaves off and sociology begins.

Jensen, in the Introduction, describes the problem of the book as

the problem of broadening the method of sociology until it includes all dependable means of testing the truth or falsity of social theorizing.

The author complains, somewhat after the fashion of Radin in the latter's recent strictures on cultural anthropologists, that

sociology is again in danger of becoming a dead science, or relapsing into a polite amusement of our intellectual classes . . . largely due to the invasion of the spirit and method of the so-called natural sciences into the field of the social sciences.

There is, therefore, a tendency upon the part of Professor Ellwood to discount the statistical approach as a valuable method of dealing with much sociological data.

In many fields quantitative exactness is not possible, probably never will be possible, and even if we had it, would probably not be of much more help to us than more inexact forms of knowledge.

WILSON D. WALLIS

## AMERICA

*Inugsuk, a Mediaeval Eskimo Settlement in Upernivik District, West Greenland.* THERKEL MATHIASSEN. (Pp. 147-339, 52 figs., 21 pls. Copenhagen: Meddelelser om Grønland, Vol. LXXVII, 1930.)

*Ancient Eskimo Settlements in the Kangâmiut Area.* THERKEL MATHIASSEN. (149 pp., 42 figs., 8 pls. Copenhagen: Meddelelser om Grønland, Bd. 91, Nr. 1, 1931.)

These two papers embody the first results of the comprehensive program of archaeological research conducted by Dr. Therkel Mathiasen for the Danish Commission for Scientific Surveys in Greenland. As detailed reports of the first systematic excavation of Eskimo ruins in Greenland they provide a much needed chrono-

logical record of culture growths and contacts at two strategic points on the west and southwest coasts.

The first paper deals principally with the excavation of a midden on the island of Tunúngassoq near Inugsuk, in the Upernivik District.

As the most northerly district in West Greenland it was of particular interest, in that presumably it was there that the Eskimos first came into West Greenland, and consequently one might expect to find the earliest remains of Eskimo habitation in West Greenland (p. 147).

In addition, particular interest attached to the Inugsuk region because of a legend that Norsemen had formerly dwelt there and because of a rune stone, dating from the latter half of the thirteenth century, which had been found in a stone cairn in 1824.

There is a detailed account of the excavations, and the artifacts are fully described and splendidly illustrated. As in the author's previous work "*Archeology of the Central Eskimos*," a valuable feature is the full discussion of the range of the various implements and their relation to other Eskimo material within and outside of Greenland. For comparative archaeological material from Alaska the only available source that is at all comprehensive is Mathiassen's "*Archeological Collections from the Western Eskimos*." The latter work, however, was based mainly on material purchased from Eskimo, and the conclusions Mathiassen drew as to the relative ages of the various types are not usually borne out by the stratigraphic excavations which have been made in Alaska. The present work thus inherits the defect of its predecessor to the limited extent that the latter is utilized as a basis for chronological determinations.

Two habitation periods were distinguished in the midden

... a relatively late one, [ca. 1750-1850], with objects originating from Danes and whalers, and a much earlier one, devoid of such objects. To the former period belonged the three ruins and the upper layers of the midden; to the latter the bigger, lower portion (p. 160).

The relationship of the early Inugsuk culture to the Thule culture is as follows:

Of the types of the Inugsuk find we thus see that 89 per cent belong to the Thule Culture; four percent are later, widely distributed forms, seven percent are special West Greenland forms (of which a few have been transplanted to the east coast), and two percent are forms peculiar to Inugsuk. The first of these figures shows that the Inugsuk find is very closely related to the Thule Culture; the second, that it is later than the other Thule finds, and finally, the two latter figures show that a special West Greenland development has commenced (p. 273).

The absence at Inugsuk—and also at Comer's Midden in the Cape York district—of some of the more important Thule elements, particularly knife handles of two pieces lashed together, bird figures, earthenware vessels, nuglutang, realistic etching, and the "ladder" design, leads to the further conclusion that

... the Inugsuk find cannot simply be called Thule Culture, but must be said to represent a special Greenland culture, the Inugsuk Culture, closely related to the Thule Culture and a further development of it. . . .



Naturally enough, the Thule Culture find that is nearest to the Inugsuk find is Comer's Midden, from which Inugsuk is only separated by Melville Bay and to which it is presumably nearest in point of time too. . . . The greater part of the find from Comer's Midden, however, is older than the Inugsuk find, as the harpoon heads show; but it is possible that its youngest part is contemporaneous with Inugsuk (p. 275).

One of the most important results of the Inugsuk excavation was the discovery in the midden of Norse objects, on the basis of which the Inugsuk culture is assigned to the thirteenth and fourteenth centuries. These objects, which are very similar to others previously found in Norse ruins in South Greenland, are: a piece of bell metal; a piece of cloth woven of coarse twisted wool, two wooden dolls which appear to be attempted portrayals of mediaeval European costume; a carved wooden face with distinctly European features and a scrolled decoration on the back; and a bone top decorated with perfectly grooved concentric circles. In addition, Mathiasen considers that Norse influence is responsible for other elements of the Inugsuk culture such as coopering, antler spoons with oval bowls and openwork carving on the handles, baleen saws and daggers, ornamented bodkins (resembling mediaeval styli), and iron. Analysis of the iron showed it to be 'semi-hard steel with the same watery, stratified structure that is found in damascened steel.'

This structure is quite different from that of both meteoric and telluric iron. At Inugsuk the Eskimos must thus have obtained their iron elsewhere, and presumably from the Norsemen, who, as we now know, themselves extracted iron from ore in Greenland and may have been able to produce more than they themselves had use for (p. 299).

Copper, assumed to have come from the copper regions of Arctic Canada, was also found and an analysis of this would likewise have been desirable.

The Inugsuk find throws further light on the much debated question as to whether the Eskimo who formerly inhabited Northeast Greenland had entered that region from around the North coast or from the south around Cape Farewell and up the East coast. Mathiasen sees evidence that migrations have proceeded in both directions. The many and striking resemblances between the Inugsuk material and that from south of Scoresby sound point to a movement from the south, since most of the features common to the two localities are absent in the Cape York district, to the north of Inugsuk. On the other hand indication of an earlier movement along the North coast is seen in the presence in Northeast Greenland of such Thule traits as side prongs for bird darts with bilateral barbs, snow knives with two shoulders, and bird figures (pp. 282-283).

Stone artifacts are not particularly abundant at Inugsuk

. . . which is naturally explained by the fact that there are not many rocks in the northern part of Upernivik district that are suitable for making implements of stone, while at the same time there was access to some iron (p. 279)

This raises an interesting problem in connection with Solberg's West Greenland "Stone Age." The stone objects from Inugsuk are divided into two groups: "(1) Thule types, with a wide distribution; (2) types with a confined West Greenland

distribution" (p. 280). All of the types of the latter group and some of the former belong to the "Stone Age"; but there are still other "Stone Age" types (small triangular arrow heads, rounded knife blades, small crooked knife blades, and numerous variants—all examples of chipping technique) which are not known from Inugsuk. This leads Mathiassen to conclude that Inugsuk is probably older than the "Stone Age":

Whereas Inugsuk is thus principally at the Thule Culture phase as far as the stone objects are concerned, although a special development has started, a vigorous further development of these special forms has taken place in the "Stone Age", while at the same time quite a number of types have been created, some of the old Thule types have fallen into disuse. This argues decisively that West Greenland's "Stone Age" is of later date than the Inugsuk find (p. 280).

Until the other features of the "Stone Age" are known, its cultural position must remain in doubt. However, the reviewer does not see that the available evidence supports the statement that the special forms of the "Stone Age" are "a further development" of the Inugsuk culture, nor that the absence of certain Thule types in the "Stone Age" proves these to have fallen into disuse. It might be well to recall that the Old Bering Sea culture in Alaska and the Dorset culture in northern Canada both made extensive use of chipped stone implements in addition to those of rubbed slate. In contrast the later Punuk culture in Alaska and the Thule in northern Canada employed fewer forms and those mostly of rubbed slate. An important point to be determined would be whether or not the "Stone Age" employed iron as did the Inugsuk and all later culture stages in Greenland. If the "Stone Age" was later than Inugsuk it probably would also have made use of iron since Disco bay, its most important center, is closer to the source of supply than is Inugsuk. If iron was not used and if its other features remained distinctive, the priority of the "Stone Age" could hardly be questioned.

A second problem concerns the identification of the Eskimo whose traces were observed in South Greenland by Eric the Red in 982.

... this information shows that there have been Eskimos in Greenland as early as in the tenth century, two or three hundred years before the time of the Inugsuk find. These Eskimos must have been at an earlier stage of the Thule Culture; among them we will not find the culture elements that are the result of Norse influence. Unfortunately no trace has so far been found of these, the first Eskimo people in West Greenland (p. 302).

Since nothing is known of this pre-Inugsuk population its identification with the Thule or any other culture would seem premature.

This tendency to explain away any non-Thule or possibly preexisting culture is a natural consequence of Mathiassen's theory that the wave of migration which brought the Thule culture from Alaska was the "first spreading of the Eskimos over the Arctic coasts of America" (p. 325). If this were an established fact the problem of the origin of Eskimo culture would be greatly simplified, but unfortunately the theory is open to serious objection. If the oldest Thule sites in the Central regions go back a thousand years, as Mathiassen has supposed, the Thule culture in Alaska from which they sprang must be equally old or older. However, we have learned

from recent investigations in Alaska that it is the modern or barely prehistoric sites which show the closest resemblances to the Thule culture. To account for the presence at the more recent but not at the older Alaskan sites of such important Thule elements as ivory bird figures; objects pertaining to dog traction (flat bone sled shoes, trace buckles, swivels); drilled lashing holes on harpoon heads and rivet holes for the blade; soapstone lamps; and pictographic art, it seems necessary, as the reviewer has done,<sup>1</sup> to postulate a return migration of Thule peoples to northern Alaska within the past few centuries, subsequent to the original eastward spread of the Thule culture. This would imply that the original Thule culture is yet to be discovered. Another weakness of the theory that the Thule Eskimo were the first to occupy the Arctic coasts of America lies in the strong probability that north and east of Hudson bay they had been preceded by Eskimo of the Dorset culture. The validity of the latter culture can no longer be seriously questioned. Jenness has described its main features and demonstrated its independence of the Thule culture in the region around Hudson strait,<sup>2</sup> and this view has been further borne out by Wintemberg's discovery of ancient sites of pure Dorset culture in Newfoundland and south Labrador.<sup>3</sup> Any theory that attempts to trace the development of Eskimo culture must give serious consideration to these puzzling Dorset remains, which are now known from northern Greenland to southern Labrador and which appear to represent an earlier culture stratum than the Thule

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In 1930 Mathiassen's investigations were carried on in the Kangâmiut (Sukkertoppen) District in the southern part of West Greenland.

I chose that area for several reasons: It lies close to—a little to the south of—the boundary between the arctic and the subarctic cultures on the west coast; consequently one might expect still to find traces of the old culture from the north with its arctic traits. Furthermore, it is known to be one of the first places where the whalers landed and came in contact with the Eskimos. And finally, it seems to be one of the localities in South Greenland that are richest in old ruins (p. 3).

Besides extensive excavations in the middens, 20 house ruins were excavated and many others sampled. The houses were found to be of three types and it is principally on the basis of these that two main culture periods are recognized:

an early one, during which people lived in small houses, usually round, and on the whole commencing at a time prior to the coming of the whalers to the country, and a later one, when they lived in foursided houses, at first large common houses, later smaller houses of earth, each of these periods is characterized by its own particular types of Eskimo implements. The boundary between them may be taken to lie just after the whalers arrived, presumably about 1650 (p. 122).

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<sup>1</sup> S. MUSEUM, no. 14 43-44.

<sup>2</sup> Geogr. Rev. 15, no. 3 428-437, 1925.

<sup>3</sup> D. Jenness, in *The American Aborigines, their Origin and Antiquity*, 390-396, Univ. of Toronto Press, 1933.

Careful analysis of the artifacts leads to a further division of the earlier period into two and the later into four stages. The First stage is closely related to the Inugsuk culture as is shown by a correspondence of 84 percent of its traits. However, a dozen or more important Inugsuk elements are missing, from which it is assumed that the First Culture Stage in the Kangâmiut area is a little later than Inugsuk. It is therefore assigned to the period from 1350 to 1500 A.D. Since the Norse settlement in West Greenland is supposed to have been destroyed by Eskimo from the northward at about this time, ca. 1370, it is somewhat surprising that, aside from some bell metal, the finds from the Kangâmiut area include no objects of undoubted Norse origin while a number of such objects were found at Inugsuk, over 500 miles to the northward.

The Second Culture Stage belongs to the period 1500 to 1650. Most of the implements are types known from the preceding period, but new forms also appear; flat harpoon heads begin to predominate in place of the Inugsuk and other thin types, and the wick ledge on lamps disappears.

The later periods are divided into the 3rd Stage, 1650 to 1700; the 4th Stage, 1700 to 1750; the 5th Stage, ca. 1750; and the 6th Stage, nineteenth century. Despite the fact that the material from these later stages is scanty—only some 200 artifacts in all—the segregation of implement types and the variations in house forms seem sufficient to bear out the sequence.

In West Greenland, as elsewhere in the Eskimo territory, the harpoon head is a highly valuable criterion of cultural change. Mathiassen's table of the percentage distribution of the four main types of harpoon heads from Pt. Barrow, Alaska, to West Greenland (p. 74) shows at a glance how as we come eastward the flat types begin to appear at the old Thule sites in northern Canada along with the predominating thin Thule types; how the thin types still prevail at the earliest Greenland sites—Comer's Midden and the early culture at Inugsuk—although the flat types are gaining; and, finally, how these continue to gain until by the nineteenth century, at Inugsuk, they have entirely supplanted the earlier thin types. That such has been the general order of occurrence there can be little doubt, but the table is so condensed and general that several pertinent facts are obscured. The harpoon heads from the Van Valin site at Pt. Barrow, given as the first link in the chain, are not Thule heads; they belong to the Birnirk type which according to every indication preceded the Thule. Typical Thule No. 1 and No. 2 harpoon heads occur in Alaska, but, like a number of other important Thule elements, they come from the later rather than the earlier prehistoric sites. It should also be noted that the thin-open-socketed Thule No. 3 harpoon head is still in use among the Polar Eskimo of Northwest Greenland, although the table shows this type to have disappeared by the time of the First Kangâmiut Culture Stage, 1350 to 1500 A.D. A more fundamental objection to the table lies in its omission of the Cape Dorset types. It is true that the Dorset heads do not fall into the four main groups under discussion, but they cannot for that reason be ignored. The omission of the Dorset types from the eastern harpoon head sequence is to the reviewer sufficient reason for doubting that

... this series of finds, in the order they are placed, show the development of the Eskimo culture from west to east, from Alaska across the Central region to the Cape York district, and from there down to West Greenland. . . (p. 74).

Mathiassen's earlier work "Archeology of the Central Eskimo," which established the Thule culture in Arctic Canada, marked a notable advance in Eskimo archaeology: the careful researches on which it was based, showing the profound influences which had been exerted in the Central regions by an old Eskimo culture originally derived from the West, called for a reorientation of the entire problem of Eskimo prehistory. However, it is going entirely too far to assume, as Mathiassen does, that all other Eskimo cultures are either later than or derived from the Thule. In view of what we have learned from recent excavations in Alaska,<sup>4</sup> and as the case of the Dorset culture also shows, one is forced to the conclusion that, whatever may have been the significance of the Thule culture, it is much too recent to have had any bearing on the fundamental problem of the origin of Eskimo culture. The author's preoccupation with the Thule culture has often led to what the reviewer feels to be an erroneous interpretation of the evidence. Fortunately, the several examples of this tendency herein cited do not impair the general excellence of the two papers under review; on the contrary it is their conspicuous merit that the facts are presented in such a manner that the reader can draw his own conclusions. Previous studies on Greenland archaeology have been based almost entirely on second-hand material, even such important works as those of Solberg, Wissler, Thalbitzer, and Thomsen. Mathiassen's careful excavations at Inugsuk and in the Kangâmiut area mark the introduction of the systematic method and for that reason, if no other, these two reports will remain as important landmarks in Greenland archaeology.

HENRY B. COLLINS, JR.

*Red Mother.* FRANK B. LINDERMAN. (256 pp., \$3. New York: John Day Co., 1933.)

Mr. Linderman's two earlier books on the Crow have been noted in this journal (AA 34:532, 717, 1932). The present contribution is perhaps the most valuable of the three. It is the autobiography of a Crow woman, Pretty-shield, of the Sore-lip clan, as dictated to Mr. Linderman via another woman, Goes-together, acting as interpreter. I am not ashamed to confess that I have learnt a number of things from this layman's production. It supplies precisely some of those things one is likely to miss without recourse to the autobiographical technique. The account of the girl's games rings especially true, as does the report of a wound-doctoring (pp. 203-206). Indeed, many details are wholly authentic, e.g., the description of old age in terms of the cracking of the skin (pp. 45, 221); the lifting of a visionary by a bear visitant (p. 188); the revelation of a lullaby by a female animal (p. 113 f.). So far as I know, Mr. Linderman is the first to record the use of stilts among the Crow (p. 33), though Culin credits the Shoshone with them. I have verified the statement through the good offices of my interpreter, James Carpenter; he writes me (Novem-

<sup>4</sup> S-MC 81, no. 14: 43-46; SI-Publ. 3111: 135-144; Geogr. Rev. 22, 118-119.

ber 10, 1933) that both Crow boys and girls had used them—the latter more particularly: “Stilts were made according to age of the users, all the way from six inches up to seven and eight feet.” There are also worthwhile particulars about maternity customs (pp. 145–149).

Pretty-shield told the author that a man and his sister-in-law were not permitted by tribal law to speak to each other after the woman's marriage (p. 17). This is contrary to my data: according to Gray-bull, who discussed these matters with me about twenty years ago, a brother-in-law ceases to indulge in frivolity with his married sister-in-law, but there was no taboo. Dick Wallace and Yellow-brow, recently questioned by Carpenter at my suggestion, support Gray-bull.

A misconception appears in the account of one of the Crow Sun Dances (p. 208 *seq.*). Mr. Linderman's informant is made to credit a woman, Sitting-heifer, with the vow to perform this ceremony; but, because of her not being morally pure, Plenty-coups is represented as appearing on the fourth day and deliberately killing her with his gun as a punishment for her attempting what she was unfit to undertake. On the face of it, this struck me as a confusion of ideas, for I had never heard of a Crow woman *pledging* the ceremony, while the important but ancillary office of tree-notcher did carry with it the obligation of perfect chastity. Also I had recorded the story of one performance which terminated with the *accidental* death of the pledger's *wife* because of the spuriousness of the Sun Dance doll used.<sup>1</sup> However, I submitted the case to Mr. Carpenter for further elucidation and am able to offer the following correction, based on the joint testimony of the two older men cited above. Both agree that there has never been a woman Whistler in the history of the Sun Dance. Sitting-heifer was the *wife* of Long-ear (a'pátske), the pledger of the performance in question. It was on the fourth day, when the selected war captains and men of valor came in to enact their deeds. The guns were laid in the rear of the lodge pointing north; and one of them went off accidentally, hitting Sitting-heifer in the breast. It was contended that the fatal gun belonged to Plenty-coups, but no one could be sure.

This was the last Sun Dance any one can remember, taking place about 1872. Wallace and Yellow-brow explain that the Whistler broke a taboo connected with the lodge, hence the misfortune. Long-ear's brother had been killed by the Dakota while crossing a river, whence his pledge. However, shortly after this event a Crow party of which Long-ear was a member destroyed a group of Dakota, which eliminated the need for further revenge. The older men of the tribe warned Long-ear against carrying out his vow, since the ceremony ought to be held only if revenge failed prior to the building of the lodge. He disregarded their advice, had the structure erected, and hung up the hand of one of the slain Dakota, which he dried and kept for the occasion. The rationalization differs from that previously published by me, but on the essential point—whether Sun Dances were ever pledged by women—this recent information supports the earlier data.

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<sup>1</sup> R. H. Lowie, *The Sun Dance of the Crow Indians*, AMNH-AP 16. 49, 1915.

It is regrettable that Mr. Linderman ignores published and relatively accessible data on the Crow. He states that the nature of their ceremonial tobacco is an unsolved mystery (p. 85), yet over twenty years ago it was identified as *Nicotiana multivalvis* by Professor A. T. Setchell of the University of California. Also neither "The-war-clubs"—Lumpwoods (p. 42) nor the Foxes (p. 168) formed a *secret* society any more than any other of the Crow military organizations. As for the length of Long-hair's hair which the author puts at over twenty-five feet (pp. 220, 256), the estimate of contemporary early travellers is from 9 feet 11 inches to 10 feet 7 inches.<sup>2</sup>

In another matter Mr. Linderman and I have been equally culpable: we both designate a mythological character as Red-woman (p. 54), which is plausible but takes no account of an extra syllable (hi'cictawí'a, hi'ci, red, wí'a, woman). In 1931 my informants uniformly rejected the interpretation without being able to supplant it with a better rendering.

But whatever reservations have to be made in the case of a popular book, Mr. Linderman's offering of Pretty-shield's reminiscences is in a very real sense a contribution to Crow source material.

ROBERT H. LOWIE

*Aboriginal Society in Southern California.* WILLIAM DUNCAN STRONG. (X, 358 pp. 7 maps. University of California Publications in American Archaeology and Ethnology, vol. 26. Berkeley, 1929.)

This monograph is the result of the author's efforts to determine the "general pattern of aboriginal society" in southern California. It is not an ethnography in the usual sense, for material culture and such other traits as are irrelevant to the central problem are omitted.

The bulk of the volume comprises data on social organization collected by the author during months of field work from six Shoshonean-speaking tribes, among whom it was believed aboriginal institutions would be best preserved. The tribes are the Serrano, the Desert, Pass and Mountain Cahuilla, the Cupeño, and the Luiseño, to each of whom one of the first six chapters is devoted. Original material is supplemented by the research of previous workers. These chapters are well documented with records of marriages, clan and moiety membership, and genealogies. Where concrete data to demonstrate informants' assertions are lacking, the fault is not the author's; it is simply another regrettable instance in which the native group or its culture has perished before it could be reached.

The data of these first six chapters will be of great value to any student of social organization, especially those interested in the development and diffusion of the sib and moiety. The author finds, as the basic social structure of these tribes, unilateral lineages which are practically the equivalent of "clans" (sibs). Rigid patrilineal descent, the usual inhabitation of a particular town by one or several col-

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<sup>2</sup> *Ibid.*, The Material Culture of the Crow Indians, 228, 1922.

lateral lineages, identification of the members of the group by the place name, and lineage exogamy are long steps toward a full-fledged clan system. Occasional branching off and final complete separation of collateral lineages illustrate a manner of formation of new clans. The unity of each lineage or clan is reinforced by its possession of a priest, house, and fetish bundle complex, and by its communal participation in such religious observances as the girls' and boys' adolescent ceremonies, mourning rites, eagle killing, singing, and certain dances. Although minor departures from the basic pattern are known, the social unit in marriage, residence, religion, and in such political life as exists, is the patrilineal clan. Superimposed upon the lineage, however, is the moiety which has wider distribution in California, but is less an integral part of aboriginal society among these tribes, probably being of later, western origin. It regulates marriage and involves a small degree of clan reciprocity.

The reader who has not the time to peruse the details of the first six chapters will find an excellent and highly satisfactory summary of these data in chapter seven.

The final chapter contains a synthesis of all available material on social institutions in southern California in a broad, historical reconstruction. (This is more fully developed by the author in a previous paper, "An Analysis of Southwestern Society.")<sup>1</sup> Substantiating and in part incorporating the salient features of an earlier reconstruction made by A. L. Kroeber, the author concludes that there was: (1) an ancient culture of Hokan-speaking tribes, having girls' adolescence ceremonies and mourning rites, (2) a "clan priest, house, and fetish complex" brought to "the autochthonous lineage, along with the idea of dichotomy," by contact with the early Pueblo culture, and the development of certain special ceremonial features, during which the Shoshoneans drifted into southern California and cut off connections with the Southwest, (3) a subsequent assimilation by the Shoshoneans of the priest, house and fetish complex, and the rise of the toloache (Jimsonweed) culture, (4) finally, the development of the Chungichnish religion and shell money exchange. The method of reconstruction is that of the "American School." It is gratifying to note that archaeological and ethnographic research since the publication of this monograph have both served to verify its conclusions.

Even those who disdain historical reconstructions will find Strong's analysis and descriptions of social organization in southern California of great value. If "functionalism" requests more adequate and detailed field observations, the present work should be quite satisfactory, for such limitations as exist in the treatment of these tribes are inherent not in the field methods, but in the present inert and virtually defunct status of the society. Those, on the other hand, who concede value to historical reconstruction will find the conclusions of this paper a painstaking and scholarly contribution to the history of native American institutions, and an illuminating essay on the development and diffusion of social traits and patterns.

Without wishing in the least to underrate the excellence of this work, the re-

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<sup>1</sup> AA, n.s., 29: 1-61, 1927.



viewer takes this opportunity to express an old grudge—against authors' failing to use English translations of native terms. It would be so much easier for those of us who have not phenomenal memories. The present work, however, is, compared to others well known to all of us, only mildly troublesome in this respect.

JULIAN H. STEWARD

*New Types of Old Americans at Harvard.* GORDON TOWNSEND BOWLES (144 pp., 146 tables, 20 figs. \$2.50 Cambridge. Harvard University Press.)

The concept is slowly gaining ground among physical anthropologists that the human organism is a vital, dynamic complex whose balance is delicate enough to register the play of the numerous influences upon it. Although this is not a new idea, nevertheless in the older literature the dominant view regarded man as static. At least, the problems relating to mankind were approached with that bias. Perhaps the severest shock this point of view received came from the results of Boas's study on the changing form of the children of immigrants. Since then the influence of more general biological theories has tended to shift the emphasis in physical anthropology away from the spider-like spinning of neat but tenuous patterns in systematics to the more fundamental issues.

Dr. Bowles' investigation of the changing physical types of Harvard men is in line with these tendencies. The problem with which he is concerned is one that has received wide attention, both in Europe and in America. This is simply that stature has been observed to be increasing at a considerable speed. The phenomenon has been reported in Sweden, Norway, Denmark, Holland, England, Germany, Switzerland, Italy, Japan, and the United States. The most notable for the length of the period of observation is the increase measured on the recruits of the Canton St. Marie Vesubie. Here there has been an addition to the average stature of a homogeneous population of 9.5 cm in the course of over 70 years. The greatest weakness in all these observations, however, has been the lack of an adequate check on socio-economic status, homogeneity of type, and place of origin, for these among other factors are well known to have a distinct effect on the stature. In the present work Bowles has been fortunate enough to have a well-documented series of measurements on Harvard fathers and sons, and in some cases grandfathers, whose origin and socio-economic rating can be determined, and where ages were comparable. Lacking, however, is any reliable information on the distaff side of these successions. A comparison by generations revealed an average increment to the mean stature of .08 cm per annum. Other dimensions of the body, as well as weight, partake of this quantitative addition. The same phenomenon was found to be apparent in a sample drawn from Wellesley, Vassar, Smith, and Mt. Holyoke.

Bowles suggests the following factors, in the order of their importance, as operating to produce the results which his data indicate:

1. Increased medical attention in preserving those children who have outgrown their strength until they have reached maturity and a normal resistance to disease.
2. Cultural modernization and a general speeding up process.

3. Better food in more abundance and greater variety.
4. More exercise.
5. Possible assortive and selective mating on the part of parents.
6. Occupational change of parents.
7. The non-ascertainable elements of climatological and meteorological effect.

The significance of these results needs no stressing. Dr. Bowles has handled his material in a competent fashion and is to be congratulated

H. L. SHAPIRO

*Agriculture of the American Indians: A Classified List of Annotated Historical References.* EVERETT E. EDWARDS (U. S. D. Agriculture, Library, Bibliographical Contributions, No. 23, Second Edition, June, 1933).

A list of 524 items, preceded by a short term paper; should be appreciated especially in school and public libraries because of attention given to the popular and more accessible magazines, but is also of some use to the serious student. The list is roughly classified, but is not critical, no distinction being made between contributions and popular rewrites, and the abstracts being at most those of a bibliographer. Ethnological and botanical studies by Americans are fairly well represented; European contributions much less so. The historical sources are absent; not even Acosta or Oviedo y Valdes is mentioned, Dobrizhoffer being the only older name I have noted. Of the great naturalist travelers of the eighteenth and nineteenth centuries Bartram is the lone presentative I found in the list. The Addenda, which distinguish the second edition from the first, unfortunately are not classified.

CARL SAUER

## OCEANIA

*Life in Lesu; the Study of a Melanesian Society in New Ireland.* HORTENSE POWDERMAKER. Foreword by CLARK WISSLER. (352 pp., 2 plans, 25 ills., \$3. New York: W. W. Norton and Co., 1933.)

Dr. Powdermaker's book deals with a village of 232 inhabitants, among whom she spent the better part of a year (1929-'30). Her contribution to knowledge can be precisely gauged only by a specialist on Melanesia; the following are merely a general ethnographer's impressions.

The author is not equally concerned with all of Lesu culture, technology being avowedly slighted. Such limitation, based on personal predilection, is of course wholly legitimate. I must, however, register my disappointment at the meagre discussion of supernaturalism. Magic, to be sure, is duly stressed, and so is ceremonial behavior; but of the subjective side of religion we learn relatively little. What obviously interested Dr. Powdermaker above all other phases of native life is social structure and usage, including the sociological aspect of economic organization. Lesu shares many traits with other Melanesian communities: there are matrilineal exogamous moieties, named after birds, each subdivided into clans (p. 33 sq.); the

old men are the rulers of the village (p. 41); matrilineal descent does not preclude transfer of property from father to son (p. 43 *et passim*); and the boys' initiation looms as an outstanding ceremonial occasion (p. 102 *sq.*). Other features are more distinctive, such as the preference for marriage with a mother's brother's daughter's or a father's sister's daughter's daughter (p. 50), and the occasional sanctioned occurrence of polyandry, in which case the second husband pays shell currency to the first and not to the wife's kin (p. 227). However, polygyny was far more common; in fact, Miss Powdermaker directly observed only one polyandrous union. Quite as remarkable as polyandry is the established practice of permitting sex relations with a number of additional concubitants—a liberty granted to both sexes.

A young married woman without lovers would be in the same social position as a young girl in our own society who never has any beaux or is never invited to parties. (P. 244).

Notwithstanding these customs marital jealousy is not lacking in particular cases.

Dr. Powdermaker's presentation is uniformly sane and lucid—apart from a few disturbing typographical atrocities, as when *ingatsung* is defined as "male speaking, husband's father's brother's wife" (p. 50); and when, in conflict with all other statements, even in the same sentence, the preferential marriage suddenly figures as that with a mother's brother's daughter, instead of with this cross-cousin's daughter (p. 327).

In my opinion the long section on "Work" (pp. 154–225) forms the most valuable part of the book. Its approach to primitive economics seems inspired by Dr. Malinowski—to whom the volume is dedicated—and Dr. Thurnwald, and these masters have reason to be proud of their disciple. I do not recall a clearer picture of the economic organization of any primitive tribe.

ROBERT H. LOWIE

*Life or Death in Luzon.* SAMUEL E. KANE. (331 pp. Indianapolis: Bobbs Merrill Co., 1933.)

Despite its somewhat lurid title and its attempt to capitalize the sex life of the savage this book contains much of interest and value to the ethnologist. The author spent thirty years among the pagan tribes of the Northern Philippines as soldier, supervisor, and finally as governor of the Mountain Province. He had an unusual opportunity to witness ceremonies and practices seldom seen by white men. At times he becomes confused in his dates—as when he places the death of William Jones prior to the inauguration of Governor Taft—and he has brought into his narrative some good old stock Philippine stories, but essentially the book is sound.

The account of the head-hunt in which he participated is probably the only authentic record of an eye witness we possess.

The volume adds considerably to our knowledge of the Igorot and Ifugao, given in the earlier books of Jenks and Barton, and should be included in every collection of Philippine books.

FAY-COOPER COLE

## AFRICA

*Caravans of the Old Sahara; an introduction to the history of the Western Sudan.*

E. W. BOVILL. (300 pp., 13 maps. Published for the International Institute of African languages and Cultures. London: Oxford University Press, 1933.)

This is a compilation of the gist of the information contained in the known histories and works of travel concerning the country west of Lake Chad and bounded by Morocco, Algeria, and Tunis on the north and the Gulf of Guinea on the south. The book seems to be a series of articles or lectures, as each chapter is complete in itself and there is little chronological continuity in the events described. Unfortunately the chronology (pp. 270-271) is not a complete record of all these events, but a good index facilitates reference. The author is generally non-committal in his statements and merely voices the opinions of the authorities cited. In this respect he is wise, as many of the views expressed by recent British and French writers must be considered merely tentative. The absence of genealogical trees tracing the reputed national and tribal descents of the peoples dealt with from races who lived prior to the Christian and Moslem eras tends to make some of the deductions inconclusive. The Jews have ceased to be a nation for nearly two thousand years. At the present day the word "Jew" is merely a religious classification, as Moslem or Christian. We suggest that Semitic is more accurate in describing the descent of races who are not actually practicing the Jewish religion to-day. The Spanish Jews who migrated from the terrors of the Inquisition to Salonica and thence to Egypt possess no physical affinities with the black Jews of Morocco or the Falasha. One of the results of the development of Arabic education in Africa has been a tendency to accept the written word as an historical fact. The tendency of Moslem negroids to claim a descent from their Prophet has resulted in the compilation of numerous genealogies made to order by natives who have obtained cheap copies of the Arabic histories etc., which have been published in Cairo for fifty years prior to 1914. The maps showing the country at various periods would be more intelligible if the various territories were shaded or colored, the maps uniform in scale, and the area shown. Some of the reproductions of medieval maps are of considerable interest.

In conclusion, the work may be of use to those to whom a good university or public library is not accessible. For our part we should prefer the recognized authorities on African histories north of the Equator, as although the merchants or travelers did not as a general rule perform the entire journey, the natural route from Arabia to Nigeria was via Axum, Sennar, and Dar Fur, as the desert barriers are not so formidable.

ARTHUR E. ROBINSON

*The Bantu Tribes of South Africa: Reproductions of Photographic Studies.* A. M. DUGGAN-CRONIN. Vol. II, Section III, Plates LIII-LXXVIII. The Suto-Chuana Tribes, Sub-Group III, The Southern BaSotho. With an introductory article on the Southern Basotho and descriptive notes on the plates by G. P. LESTRADE, and a bibliography of the Southern BaSotho by I. SCHAPER. (21s. Cambridge:

Deighton, Bell and Co., Ltd.; Kimberley: Alexander McGregor Memorial Museum, 1933.)

In these days of restricted budgets for printing and more especially for illustrations it is a pleasure to survey the splendid series of twenty-six photographic studies illustrating the life of the Southern BaSotho. The landscapes and views of people in action convey accurate impressions that no amount of verbiage could duplicate. The plates are preceded by a brief account of the group by Professor Lestrade and by a bibliography by Professor Schapera.

E. W. GIFFORD

### MICELLANEOUS

*Československá Vlastivěda (Czechoslovakia in All Its Aspects)*. Vol. II, *Člověk (Man)*. Edited by Jiří Horák, Jindřich Matiegka, and Karel Weigner. (624 pp., Kč 300. Prague. "Sfinx" Bohumil Janda, 1933.)

Under the auspices of the Czechoslovak Academy of Work a series of cooperative studies is being published in Czechoslovakia, which is to include every phase of the physical, social, economic, and political background of the Republic of Czechoslovakia. Dr. Václav Dědina is editor-in-chief.

After studying the present as well as the previous volumes which have appeared, it can be safely stated that no other work of its kind, comparable in scholarship, editorship and ambitiousness of purpose, has appeared so far in Czech or in any other language. Contrary to the usual practice of European publishers, the present volume is beautifully bound and printed on durable paper, innumerable illustrations, reproductions of documents and photographs and statistical tables are a distinct joy. Altogether twenty-six experts in their individual fields have written one or more of the several chapters, which deal, in summary, with the physical anthropology of Czechoslovakia, of the Czechoslovak minorities peoples (Ruthenians, Germans, Magyars, Jews, and Gypsies), and with the various aspects of the country and the results of the public health service there. Of special interest to us is the chapter by Dr. Jiří Malý, analyzing the physical changes which occur in the second-generation foreign-born Czechoslovak emigrants, especially in America. It is true that he depends on the research of F. Boas, Bowditch, Aleš Hrdlička, and Jan Auerhan in that field, but he adds much to the conclusions already drawn. Each essay is thoroughly documented and provided with a bibliography. The index of 13 pages is very inclusive.

On the whole, the work is a lively book, of commendable virtue and minor faults. An astonishing amount of research has gone into its making and some new things have been disclosed. The fact that it is written in Czechoslovak is a distinct handicap, because even the customary English summaries are omitted. But its existence can be ignored by no scholar in the field.

JOSEPH S. ROUCEK

*Primitive Secret Societies.* HUTTON WEBSTER. (xiii, 248 pp. \$3. New York: Macmillan Co., 1933.)

The second and revised edition of Hutton Webster's *Primitive Secret Societies* has made its appearance. The preface describes the scope of the revision in this new edition.

Some corrections have been made in the text and the notes, several quotations in foreign languages have been translated into English, and the index has been considerably enlarged. Otherwise the book remains in its original form.

E. W. GIFFORD

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## DISCUSSION AND CORRESPONDENCE

### SOME ARAPAHO KINSHIP TERMS AND SOCIAL USAGES<sup>1</sup>

Professor Kroeber<sup>2</sup> (The Arapaho, pages 9 and 150) gives a list of Arapaho and Gros Ventre (Atsina) kinship terms; and on page 10 *et seq.* he discusses them, and mentions a number of Arapaho social usages, on page 150 there is a short note observing that the Arapaho system is identical with the Gros Ventre one. The present paper is not designed to replace a fuller paper on Arapaho and Atsina kinship terms etc., which I plan to publish when I have fuller material on both (especially on the Atsina which I cannot discuss at present save to mention that the alleged Atsina word given by Morgan for my daughter-in-law is not Atsina, but Cree, and to point out that Kroeber ignores Morgan's schedules, and that it is most peculiar that the Atsina have a gens-system but merge both parallel and cross-cousins with brothers and sisters, if Kroeber is correct). Apparently Spier, in his *Distribution of Kinship Systems in North America*, pages 69-88,<sup>3</sup> uses Kroeber's schedules of Arapaho and Atsina as a basis, and so his work will not be referred to again.

Kroeber's phonetic scheme of Arapaho is inadequate, but this does not affect the points at issue, with one possible exception. On page 9 the Arapaho equivalents of several terms are queried, but are supplied on page 150. I am glad to be able to confirm those given on page 150, save the term for mother's sister, which happens to be absent in my schedules, though Kroeber is doubtless right; for my own schedules show that father's brother and father are designated by the same term; the children of my father's sister are my brothers and sisters, as are also the children of my father's brother as well as my mother's sister's children, and in addition, my mother's brother's children; my parallel nephews and nieces are my sons and daughters; my cross-nephews and cross-nieces have designations distinct from these. This brings us to the question of cross-cousin marriage, for according to Kroeber's schedules and subsequent discussion, there is but a single term for daughter-in-law and cross-niece. I am compelled to state that Kroeber is in error on this point, even if his Atsina (Gros Ventre) schedules seem to support him: for I have used different informants at different times and get *násebi* for my daughter-in-law and *násebi* for my cross-niece,<sup>4</sup> on the face of it, it seems as if the latter were

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<sup>1</sup> Printed by courtesy of the Smithsonian Institution.

<sup>2</sup> AMNH-B 18.

<sup>3</sup> UW-PA 1.

<sup>4</sup> Combined with the possessive pronoun of the third person animate singular, the two terms more nearly coincide; with inaccurate phonetics confusion might easily arise. It is not likely that the term for my father-in-law, *nesi'θe* (Kroeber's *nač'č'a*), is related to the term for maternal uncle, *nesi* (Kroeber's *na'ci*), as Kroeber thinks the evidence of Ojibwa, Menomuni (*niseh* my maternal uncle, \**necihsa*; *nise'neh* my father-in-law, \**necēθehs*), and Algonkin is very unfavorable, as this would involve the assumption of a suffix otherwise unknown. An additional argument to support cross-cousin marriage is thus without foundation. (One Arapaho informant gives *neciθe* and *neci*.)

based on the former: but this is only apparent, not real. Proto-Algonquian *\*θ* and *c* in Arapaho merge into *s*; *nāseb* and *nāsebi* correspond faithfully to Fox *ne'semya*, my daughter-in-law, Fox *ne'cemī'a* my cross-niece respectively, on which see A.A., n.s., 34: 358, 359. It may be added that *naseb* also denotes my cross-nephew's wife as well as my daughter-in-law. Cross-cousin marriage is forbidden among the Arapaho. But if a man has carnal intercourse with his cross-niece, he is not looked down upon provided she is not so actually but merely classified as such; and this practice obtains commonly enough at the present time. It is true that Kroeber gives no intimation that other females are classified as cross-nieces, but with the kinship system as explained above it is obvious that with the ego male the daughters of female first-cousins would be such. Here, it may be noted, certain other kinship terms also have rather more extended values than given by him.

I may mention that Arapaho has vocative cases for kinship terms, such as *natw'* daughter! Kroeber does not give these (*loc. cit.*), but he gives a few in his Arapaho Dialects,<sup>5</sup> as I have not complete schedules I must take this up systematically subsequently. Yet, it may be noted, these are not purely linguistic phenomena; for example, there is no vocative of the Arapaho term for my wife, in place of which the vocative of the Arapaho word for old woman is used (as similarly among the Fox): which is not noted by him.

The following social usages not mentioned by Kroeber may be of interest. I have not material enough to show definitely whether the remarks apply to all who are classed as the kinsfolk or whether they apply only to such as are actually so as we conceive it, save in a few self-evident cases. A maternal uncle may not speak to his nephew's wife, nor may a maternal aunt speak to her niece's husband; it may be noted the term for daughter-in-law is the same as that for cross-nephew's wife and similarly the term for son-in-law is the same as that for cross-niece's husband, and this type of avoidance (i.e., father-in-law and daughter-in-law, mother-in-law and son-in-law) occurs over a wide area. A girl may jest with her maternal uncle but not obscenely. She has respect for him. Carnal intercourse between uncle and persons classified as cross-nieces, barring the actual cross-nieces, has been mentioned by me above. Kroeber mentions that brother-in-law and sister-in-law often joke with each other, but fails to note that these jokes are frequently obscene, and that the two often romp with each other in a manner transgressing our notions of propriety. A young blood when asked about the joking relationship between brother-in-law and sister-in-law, volunteered to narrate an experience of his own. He said that while romping with his sister-in-law (his wife was in the next room with the door unlocked) he had thrown her down and touched her person and added, "But that was as far as I could go. I had too great respect for my sister-in-law." The prominence of the paternal aunt is institutional. She may jest with her nephew (to what lengths?). Maternal uncle and nephew joke with each other, but when the nephew is grown up the uncle will refrain for fear the jesting may concern the nephew's wife with whom he can not converse (see above), except in the case of dire

<sup>5</sup> UC-PAAL 12: 119, 136.

necessity or sickness. But the nephew won't let up. He will always try to get his uncle to use filthy words in the presence of his (the nephew's) wife. A grandmother is privileged to talk vulgarly to her grandchildren, especially boys, and vice versa. The same applies (with the restriction "especially boys"?) to a grandfather and grandchildren. When a father-in-law, mother-in-law, cross-niece-in-law, daughter-in-law, maternal uncle-in-law, cross-nephew-in-law is present, and an outsider uses vulgar language, either the relative mentioned or the reciprocal will leave at once; and the other must stay to reprimand the outsider. Kroeber has noted certain persons before whom a salacious tale may not be told. This list should be amplified to contain all the persons just mentioned. If any one of these "prohibited" persons is present, he or she will throw a stick (or anything else) at the offender, or pinch him. The narrator will beg pardon. This is strictly adhered to today. Except in the presence of her mother-in-law, sister, female cousin, if a girl is at all acquainted with a man, she may say to another girl in his presence, "Let's urinate," or "Let's defecate." During coitus even a man's wife covers her face with the left or right arm. Coitus during the day-time is strictly forbidden. Fast women ignore these rules. Finally, if a younger brother has intercourse with an older brother's wife, if the older brother knows it, he will do nothing. If some one reports this to the older brother, the latter would say, "He's my younger brother and can do what he likes with my wife. It's my affair." If the circumstances were reversed, if the younger brother were past thirty, he would act similarly; if he were younger he would be angry. But either case hardly ever happens.

TRUMAN MICHELSON

#### NEW RULES FOR HISTORICAL INSTRUCTION IN GERMANY<sup>1</sup>

Readers of German periodicals and books will do well to consider carefully the following extracts from the instructions issued by Dr. Frick, Minister for the Interior, to all educational authorities in the German territories (*Unterrichtsverwaltungen der Länder*, III 3120/22.6) and reprinted in *Nachrichtenblatt für deutsche Vorzeit*, 1933, pages 81-83. The journal explains that the instructions have been transmitted to the Association of schoolbook publishers and, till the appearance of the new textbooks, are to serve as a guide for historical teaching in all German schools:

The outlines (*Richtlinien*) are not intended, and cannot attempt, to give even a summary survey of the whole material or the manner of its presentation. They only draw attention to certain important points of view that hitherto have been inadequately, if at all, presented and must accordingly be given greater prominence in the future.

Prehistory should be first mentioned since it not only locates the starting point of the historical development of our continent in the Central European cradle of our people but is further, as a preeminently national science (*hervorragend nationale Wissenschaft*) (Kossinna) better fitted than any other discipline to counteract the traditional undervaluation of the cultural eminence (*Kulturhöhe*) of our Germanic forefathers. . . .

<sup>1</sup> We are indebted for this communication to a distinguished British prehistorian.

As to details the following points are to be noted. The textbooks must begin with an account of the primeval history (*Urgeschichte*) of Central Europe (the Ice Age) and show how specific races (Neanderthal, Aurignac, Cro-Magnon) were the bearers of distinctive cultures. It can be shown already in primeval history that culture is a product of race. This fact is only obscured by the racial mixings of later times but is not canceled thereby.

From the beginning of prehistory (*Vorgeschichte*) (Postglacial times) onwards the Nordic and Faelic races spread over North and Central Europe; their principal areas of expansion as well as those of the remaining primary races of Europe are to be illustrated with simple sketches. The history of Europe is the work of peoples of Nordic race (*nordrassischer Völker*); their cultural eminence (*Kulturhöhe*) is disclosed to us not only by the relics they have left in the way of stone and bronze implements, but also by their achievements in the spiritual domain that science can infer—not least in the highly developed Nordic (Indo-Germanic) parent tongue which has ousted the languages of the remaining European races save for survivals.

We take the path to Hither Asia and North Africa with the first Nordic invasions which must have taken place already in the fifth millennium B.C. This is indicated by finds of Nordic skulls in the earliest Egyptian graves and by the early attested blonde population of the coastal region of North Africa (*cf.* Lapouge, *L'Aryen, son rôle social*, Paris, 1885). The racial origin of the Sumerians is still obscure, but their language permits of hundreds of comparisons with Indo-Germanic roots which could be most readily explained by the assumption of a former upper class of Nordic conquerors (*die Annahme einer ehemaligen nordischen Erobererschicht*). A decisive influence on the history of Hither Asia (*Eine einschneidende Beeinflussung der Geschichte*) was first exercised by the Indians, Medes, Persians, and Hittites, originally of Nordic stock (*nordrassischen*). The scholars must live through as if it were that of their own blood-relations the fate of these peoples who eventually were overwhelmed in the flood of foreign blood (*unter der Übermacht fremdrassigen Blutes*) after they had created high civilizations in India and Persia.

The history of the Greeks has again to begin from Central Europe. It must once more be insisted that it deals with our nearest racial brothers (*unsere nächsten rassischen Brüder*). Accordingly our inward relation to Greek art is quite different to that to Chinese, Japanese, or Mexican art. The Nordic Greeks as conquerors formed the aristocracy (*Herrenschicht*) in the land. In parts of Attica Carian was still spoken in the country by the native population in the time of Pausanias. Here in the south the struggle of classes was based upon a contrast of races. Both in Attica and in Sparta the full citizens constituted only a minority over against the native population and the slaves; these at least in Attica were largely of Asiatic origin. Hence the breaking down of class barriers by the democracy and the unrestrained mixing of races that thereupon set in hastened by the growing reduction in families (*Kinderarmut*) (Polybios!) sealed the fate of the Nordic race in Greece, and the decay of Greek culture proceeded with such terrible speed that in barely 200 years the Greek people sank into complete insignificance. (Data on the racial aspect of this development in Gunther, *Rassengeschichte des hellenischen und römischen Volkes*.)

The history of the Nordic peoples of Italy must likewise begin in Central Europe so that here too the racial kinship may be felt. The struggle between the Patricians and the Plebs is to be understood mainly (*vorausgehend*) as a racial struggle—hence the particularly fierce resistance to the grant of connubium to the Plebs. The Nordic element in the Romans was nearly consumed in continual wars. By the time of Tiberius only six of the old Patrician families survived. The overwhelming majority of the total population of Italy consisted of the descendants of Oriental slaves. The hopelessness of their plight formed the background for the stoical philosophy of the Romans. And so by the beginning of the new era the denordicizing

(*Entnordnung*) of southern Europe was nearly completed. The significance of the Germanic folk-migration lies fundamentally in the fact that it brought fresh Nordic blood into the Roman Empire, denaturalized (*entartet*) as it was through this racial confusion. . . . Minister Dr. Frick to the Ministerial Conference of May 9, 1933.

### AN ISOLATED MEDIEVAL MOSLEM COLONY IN CHINA

The Times (London) of August 18, 1933 contains an interesting illustrated article by G. Findlay Andrew on a colony of Moslems in China. These people are descendants of outlaws who were exiled from Samarkand by the ruling prince about 600 years ago. They were led into exile by a white camel which carried upon its back an Arabic copy of the Qoran. On reaching Keh-tzi-Kong near Sunwha on the Yellow river in the province of Kansu the camel foundered in a marsh. A settlement was made there and until recently these people spoke the ancient Turkish language of their ancestors. Their women still wear the big turban and heavily braided trousers which were in vogue six centuries ago in Samarkand. Mr. Andrew was shown the Qoran, which he photographed, and the fossilized hump of the ancient camel leader in the marsh. Compulsory education has now been introduced among these people by the Chinese government, and it is only a matter of time when they will lose their national identity and resemble their co-religionists at Peking, of which an illustration appears in The National Geographic Magazine for June 1933, page 748, plate IV.

A. E. ROBINSON

### THE AZANIAN CULTURE

In sequence of the investigations carried out by Capt. G. E. H. Wilson (Man: 32, 1932, etc.) there is an interesting article by G. W. B. Huntingford on "The Azanian Civilization of Kenya" in Antiquity for June 1933.

Definite traces of a pre-Bantu system of terracing and irrigation have been found in Abyssinia, Uganda, Kenya, Tanganyika, and Northern Rhodesia. Captain Wilson's article is illustrated by maps and diagrams of these evidences of a now extinct and non-autochthonous people in Africa. Traces have been found in the Sudan and are attributed there to Moslem missionary settlers from Arabia.

Mr. Huntingford has described and illustrated a number of stone hut circles, tumuli, and earthworks which have been discovered in Kenya and are of non-Bantu origin. There is no definite evidence of any connection with the ruins of Zimbabwe, at present, but the term Azanian has been applied to these recent discoveries, as it is considered that both the agricultural and residential evidences belong to the same migrants from the northern district of Azania which formed part of the dominions of the Christian kings of Axum in the fifth and seventh centuries of our era. There is no evidence of any connection between them and the Axumite settlements in the Sudan, but it is considered probable that the Azanian culture found in Uganda, Tanganyika, etc. dates from about the Moslem era. The subse-

quent religious wars in Arabia and the invasions of Azania and Abyssinia by the Moslems displaced a large population of Jews, Christians, and pagans who were settled on both sides of the Red Sea.<sup>1</sup>

A. E. ROBINSON

TO THE EDITOR, AMERICAN ANTHROPOLOGIST:

May we, through your columns, draw the attention of your readers to the third annual Seminar in the Caribbean, to be held in Cuba from March 7 to 14, 1934, under the auspices of The Committee on Cultural Relations with Latin America?

We believe that, especially in view of recent developments, it is of increasing importance that a growing number of Americans should have insight into the problems, culture, and lives of the Cuban people. The Seminar in Cuba, like our annual Seminar in Mexico, is designed to bring its members into contact with the plans, projects, and beliefs of the leaders of all sectors of opinion in the country.

The Seminar will begin with lectures on shipboard en route from New York to Havana. The program in Cuba will include lectures, round table discussions, and field trips into the interior. The faculty of the Seminar, leading its discussions and perfecting its contacts with Cuba and Cubans, will include Dr. Ernest Gruening, Miss Elizabeth Wallace, Dr. Chester Lloyd Jones, and Mr. Hubert C. Herring.

Applications and requests for detailed information should be addressed to

MR. HUBERT C. HERRING, *Executive Director*  
The Committee on Cultural Relations with Latin America  
112 East 19th Street, New York, N. Y.

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<sup>1</sup> For Nabatean Agriculture see E. M. Quatremere in the *Journal Asiatique* (Paris, 1835) and Ernest Renan in the *Journal "Memoires de l'Institut"* (Paris, Tom. XXIV, 1861).

## NOTES AND NEWS

THE FIRST INTERNATIONAL CONGRESS OF ANTHROPOLOGICAL AND ETHNOLOGICAL SCIENCES will be held in London, July 30 to August 4, 1934. "The Congress is designed to include all those departments of research which contribute to the scientific study of man, in their application to races, peoples and modes of life. . . . Subsequent sessions are to be at intervals of four years. The new Congress should thus always meet at two years' interval between Prehistoric Congresses, and always in those years when the Americanist Congress meets in Europe; for example, at Seville in 1934."

Presidents of the provisional sections are: Anatomy and Physical Anthropology, Professor G. Elliot Smith; Psychology, Mr. F. C. Bartlett; Demography and Population Problems, Professor C. B. Fawcett; Ethnography, Dr. A. C. Haddon; Technology (Arts and Crafts), Mr. H. Balfour; Sociology, Professor C. G. Seligman; Religion, Professor E. O. James; Language and Writing, Dr. Alan H. Gardiner. The Earl of Onslow is President of the Congress.

Subscriptions for Membership of the Congress, £1, entitling the member to speak and vote at all meetings of the Congress, to receive the printed Proceedings, and to purchase other publications of the Congress at Members' prices, should be addressed to the Treasurer, Mr. Harry G. Beasley, c/o Royal Anthropological Institute, 52 Upper Bedford Place, London, W.C.1; all other communications should be addressed to the Congress-Secretaries at the same address.

DR. MARTIN GUSINDE writes (January 2, 1934) that he and Father Schebesta are leaving in February in order to spend a year among the Ituri Pygmies. Father Schebesta will devote himself to linguistic, Dr. Gusinde to somatological research.

MISS ELLA DELORIA, at the November 27 meeting of the New York Academy of Sciences, Section of Anthropology, meeting in conjunction with the American Ethnological Society, lectured on "Family Life among the Dakota Indians."

DR. WALTER HIRSCHBERG spoke on "Gibt es eine Buschmannkultur?" at the tenth of May meeting of the Anthropologische Gesellschaft in Wien. The lecture has been published in the Sitzungsberichte 1932-33, pages 29-33; discussion follows on pages 33, 34. Dr. Edwin M. Loeb addressed the same organization in April on "Die sozialen Organisationen Indiens und Ozeaniens," and in March Dr. Victor Lebzelter lectured on "Das Pygmäenproblem." In October of the previous year Dr. Martin Gusinde gave the obituary address for Erland von Nordenskiöld.

THE FIELD FELLOWSHIPS offered by the Anthropological Laboratory for the summer of 1934 are in ethnology and archaeology. Dr. Leslie Spier will be in charge of the ethnological group, working among the Modocs of southern Oregon, and Emil W. Haury will lead the archaeological group, excavating in the Mimbres Valley, New Mexico.





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## CRIME AND PUNISHMENT IN TLINGIT SOCIETY<sup>1</sup>

By KALERVO OBERG

EVERY Tlingit is born into one of three matrilineal phratries. He is either a Tlaienedi, a Shinkukedi, or a Nekadi. If he is a Tlaienedi, he calls himself a Raven; if a Shinkukedi, a Wolf; if a Nekadi, an Eagle. The Nekadi, however, are so few in number that they may be neglected, and we may speak of the Tlingit as Ravens and Wolves, each person referring to a member of the other phratry as his opposite. The members of a phratry consider themselves blood relatives and prohibit marriage within the group. A phratry possesses no territory, has no property, no political unity, no chiefs. While members of a phratry perform certain types of labor and ceremonies for their opposites, it is not the phratry that acts as a unit.

What is more important to a Tlingit is the fact that he is born a member of a clan. This clan has a name denoting its place of origin, a story of its genesis, a history of its migrations. The crests of the phratries have become securely established through a tradition reaching back to the mythical beginnings of the Tlingit people. The crests of the clans, on the other hand, are not on so secure a foundation. A clan possesses a number of these crests or emblems which it has gained in numerous ways throughout its history and the right to them is often questioned by other clans of the same phratry. These crests, along with songs, dances, legends, and face paintings, are jealously guarded by the clans. But the clan as a whole has no property.

The local division of the clan, however, possesses definite territories for hunting and fishing, houses in the village, and has a chief or ceremonial leader. While labor, ceremonies and potlatches are performed by members of one phratry for the members of the other, it is the clan that forms the active nucleus. In practice it is a wife's clan that builds a man's house or buries him. It is a clan that invites clans of the opposite side to a potlatch. It is a clan that carries on feuds and sees that customary law is enforced.

<sup>1</sup> This paper is part of the results of a field study carried on among the Tlingit Indians in Southeastern Alaska in 1931-32 under the auspices of the Department of Anthropology of the University of Chicago

From what has been said it would seem that the clan was a group of great solidarity, and theoretically this is true. In practice, however, this solidarity is weakened by individual status. Within the clan every person has his or her rank which is definitely known. The people of higher status, the anyeti, wield considerable power through their position and wealth, and are able to decide legal issues to their own advantage at the expense of their less important kinsmen.

In the matter of crime and punishment, the relation of the individual and the clan comes out clearly. Theoretically, crime against an individual did not exist. The loss of an individual by murder, the loss of property by theft, or shame brought to a member of a clan, were clan losses and the clan demanded an equivalent in revenge. That is to say, if a man of low rank killed a man of high rank in another clan, the murderer often went free while one of his more important kinsmen suffered death in his stead. Slight differences in status could be overcome by payments of property, but the general demand in case of murder was the life of a man of equal rank. In some instances the offending clan was of lower status and therefore none of its members could compensate for a crime committed against an important clan. It was therefore necessary to select a clan of the offender's phratry that could show some relationship to the offending clan, but in this case war usually followed, as this procedure was not legally established. In general, it made no difference whether the opposing clans were in the same phratry or in opposite phratries. Some of the bitterest feuds were between the Ganaktedi and Tlunkakadi, both of the same phratry.

Thus a clan appears to be the group of greatest unity, solidarity, and integration. There was no penalty within the clan for murder, adultery, or theft. A clan punished its members by death only when shame was brought to its honor. Crimes of this nature were incest, witchcraft, marriage with a slave, and prostitution.

Murder among the Tlingit was punishable by death when committed outside the clan. The number of murders, however, was not excessive until the advent of liquor. In the old days rivalry over women and disputes about individual privileges during potlatches sometimes led to murder. Murder was generally committed in the heat of argument, and if clansmen of both sides were present, a general fight was prevented by a chief of high rank stepping between the angry clansmen with an important crest in his hand. It was considered a desecration of the emblem or crest if fighting occurred under these circumstances.

Immediately after a murder was committed spokesmen from both clans met to decide who was to die in compensation for the murder. If the mur-

dered man happened to be of low rank and of poor reputation, a payment of goods could satisfy the injured clan. But if the murdered man was of high rank, a man of equal standing was demanded from the murderer's clan. There was generally much haggling over the rank of the murdered man and the rank of the one who was to die in compensation. These disputes always appeared in the peace dance which followed the complete settlement of the crime. The man selected as compensation prepared to die willingly. He was given much time to prepare himself through fasting and praying. The execution took place before his house.

On the day set for the execution, the man put on all his ceremonial robes and displayed all his crests and emblems. He came out of his house, stood at the doorway, and related his history, stressing the deeds that he and his ancestors had performed. All the villagers were gathered around for this solemn occasion. He then looked across to the clan whom his death was to satisfy to observe the man who had been selected to kill him. If this man was great and honorable he would step forth gladly, but if the man was of low rank he would return to the house and wait until a man of his own rank or higher was selected to kill him. When this was done he stepped forth boldly with his spear in his hand, singing a girl's puberty song. He feigned attack but permitted himself to be killed. To die thus for the honor of one's clan was considered an act of great bravery and the body was laid out in state as that of a great warrior. His soul went to Kiwa-Kawaw, "highest heaven."

The actual murderer, if a man of great rank and wealth, often went free, but if the man was of low rank and came from a poor house he went as a slave to that house in his clan which had given up a man in compensation for the murder. If property was passed as partial payment to the murdered man's clan, the actual murderer could be handed over as a slave. Even if the murderer was not forced into slavery, his position was an uncomfortable one. There was a feeling of very close unity among clansmen and when one had brought shame to his own clan, he felt the matter keenly and for a time led a miserable life.

Among a people who divided themselves into two exogamic groups, incest was bound to be a constant occurrence and facts well bear this out. There are many known cases where a man and woman of the same phratry fell in love and lived together until found out. Songs tell of the pathetic and forelorn hopes of these forbidden lovers. The penalty for incest was death, both persons being killed by their respective clansmen. In spite of this penalty incest was common enough to make the law less rigorously enforced. In cases where the man who committed incest was of high rank,

exile was imposed. The man would then go to settle among the interior people or among the Tsimshian or Haida. When the white people came with their law, the Indians soon realized that it permitted marriage between people who were not blood relatives, and they were quick to take advantage of this when it suited their purpose. The Indians claimed that this was one of their first social customs to give way before the whites and many of the young people rejoiced at the new freedom. When an illegal marriage occurred the couple went to the white settlement for protection. A peculiar case of this nature occurred immediately after American occupation, when a famous chief of the Daklawedi clan of Kake left his wife and took a woman of his own phratry. He was too powerful to be immediately killed, and had time to flee to Wrangell, where he had the protection of American law. Later his wife died and he married a woman of the opposite phratry. He could then have returned to Kake but preferred to live in Wrangell, as he feared the stigma attached to one who marries his own "sister." At present marriage within the exogamic group is common, but in the more conservative villages marriages of this type are frowned on and the couples become outcasts.

Like murder, adultery was not punishable within the clan. If a wife committed adultery with her husband's kinsman and was caught by her husband, he would ignore the matter, but if they were caught by someone else, the wife could do one of two things. She could continue having secret relations with this man and endure the social stigma attached to this, or she could keep the man as a second husband. In this circumstance the husband could do nothing but share his wife with the other man, who often lived in the same house and was his cousin or nephew in our sense. There was, however, no marriage ceremony, but the young man was not permitted to marry another woman as long as the wife wished to keep him. This custom was common among Tlingit of high rank and the natives rationalized it as a means of keeping the idle women of the rich satisfied and at home.

Adultery, when it occurred between a woman and a man who was not of the husband's clan, was punishable by death, both guilty persons being killed by the husband. If he were fond of his wife, he might forgive her, but in this case the wife's kinsmen must pay him property to clear his honor. If the adulterer escaped, there was no way of bringing him to task except by pursuit by the husband. In case the adulterer was a man of very high rank, the husband's own clansmen paid him goods to pacify him, for demanding the life of a very high man was a serious matter. When property was given to the husband by both his wife's clan and his own clan the trans-

action was known as *tuwatak'ayawaci*, "they wipe the shame from my face." Before reparation was paid, the husband remained indoors and came out only after a gathering had taken place at his house in which the property was transferred to him.

If a man of low rank had illicit connections with a woman of high rank the matter was very serious. First, the wife's clansmen killed two of the man's clansmen having rank between that of the man and the woman. This was to show that the wife's clan was highly insulted and incensed, and would not let the matter drop. The man's clan was then expected to offer for slaying one of its men of rank equal to that of the woman. If they would not do this, a feud might arise between the two clans which might last for a long time and might involve other clans, as in the quarrel between the Sitka and Wrangell people over a woman. In case the man's clan now offered a man, equal in rank to the woman, the woman's clan would be satisfied and would compensate the man's clan with property for the killing of the first two men. The adulterer was often handed over to the woman's side as a slave in partial payment or he became a slave to his own clan in order to compensate for the loss he brought about. During all these activities the husband remained indoors and came out only after a full settlement had been made.

If a woman of high rank became lax in her conduct and ran around with numerous men, her uncle might ask one of her brothers to kill her, which he was obliged to do. If a man of low rank had illicit connections with a girl of high rank, the father of the girl demanded either the man slain or a great deal of property. If the man was of as high a rank as the girl, her father could force them to marry. But if the girl was already promised to another man, the father was given a number of blankets.

Theoretically, stealing did not exist within the clan. Natural resources were held in common and food was but loosely guarded by the various house groups within the clan. If a man took a tool or a weapon that belonged to a member of his own clan, he was forced to return it. If a man of low rank was caught stealing from another clan, the injured clan could kill him. If he was of high rank, his own clan would make reparation by a payment of goods. If, by some chance, a man of very high rank was caught stealing, he was said to be bewitched. Then a shamanistic performance was held over him to discover the sorcerer who had forced him to steal in order to injure his social position. The sorcerer when discovered was killed and the crime thus compensated.

If anyone beside the clansmen or those invited were caught taking fish from clan territories, or if they were caught hunting there, they could be

killed. This was also true if anyone trespassed on clan domain or used their trade routes. Sometimes when a powerful party came to fish on another clan's territory, the owning clan would invite the transgressors to a feast, treat them well, and give them presents. This they did to shame the aggressors, who generally withdrew after such treatment. If a man was hungry he could shoot an animal in someone else's territory, but he was forced to give the hide or pelt to the owning clan.

Adopting the crest of another clan was considered stealing, but the aggressor always claimed the right to the crest through some event in the past. Conflict over the use of crests led to war between the clans or was settled by the opinion of the phratry or the transfer of property.

The penalty for assault was payment in goods. A high ranking Tlingit was very sensitive about his appearance and if in a dispute someone struck him so as to cause marks on his face, he would remain indoors until the marks were healed and until a public payment had been made to him by the clan of his assailant. If a man of high status injured his face by falling in the street of his village, he would remain indoors until the marks had healed, then he would give a small feast to his own clan. This was to compensate his clan for the shame brought to it by his disfigurement.

If a man was injured or accidentally killed while out hunting with the members of another clan, this clan would have to compensate the dead or injured man's clan by a payment of goods. If the man killed was of very high rank and his death could be shown to be due to the carelessness of his hosts, then the dead man's clan could demand that a man of the hosts' clan be killed.

If a person was injured by a dog belonging to another clan, the owner of the dog would compensate for the injury by a payment of goods to the injured man. Harm coming to pass through another clan's property had very wide ramifications and was always settled by a payment of goods. Falling twice before a man's house would entitle the one who fell to ask for a payment of goods. Catching a chill in another man's house, injuring one's self with another man's tools, or becoming angry or irritable due to contact with others, would give a right to a small payment of goods, provided these injuries were caused by members of another clan.

Another example of this appears in the case of suicide. If it could be shown that a man had committed suicide because his wife had treated him badly, then a man of his wife's clan could be selected and killed. Therefore a Tlingit woman was very careful how she treated her husband. This punishment was also meted out to others who caused a man to commit suicide.

Many articles, such as canoes, tools, traps, weapons, and such lesser ceremonial gear as masks and dancing shirts, were owned by individuals. Other individuals, either within the clan or outside, could borrow these, provided they brought them back or replaced them at some later date. If the borrower failed to return the article within a reasonable time, the lender could disseminate stories of ridicule about him. These stories were somewhat in the nature of the paddle songs of the Tsimshian, but not so highly stylized, and like the paddle songs they heaped ridicule upon the debtor until he came to terms. These stories were used only when it was well known that the debtor was able to pay but refused for selfish reasons. If these stories did not have the desired effect, the creditor could discuss the matter with members of his own clan. If the debtor belonged to the same clan and was in a position to pay, the social pressure of the clan was sufficient to bring him to terms. If, however, he was unable to pay and there was little likelihood of his ever being able to pay, the clan would permit the creditor to take the debtor as a debt slave.

The debt slave, when a clansman, was not treated exactly like a chattel slave. True enough, he lost his freedom and status, but it was understood that when he had worked long enough to repay the debt, he would be freed and would regain his former status. A debt slave was not sold or given away at a potlatch unless he belonged to another clan.

If the debtor belonged to another clan, a different procedure took place after ridicule ceased to have effect. The creditor would have a crest of the debtor's clan made which he placed on the front of his own house or on a totem pole. Among the Tlingit clan crests were jealously guarded, and the fact that another clan had taken one brought great shame to the clan to which it belonged. All the people in the village would at once notice it and the story come out. The debtor's clan was now dishonored and would make considerable efforts to pay the debt. Usually a wealthy house group paid the debt and took the debtor as a debt slave, thus saving the honor of the clan.

The taking of an important clan crest was always resorted to in the case of a prestige potlatch. If a clan refused to give a return potlatch to another clan of the opposite phratry, the creditor clan could take a crest and keep it until payment was made.

Names could be used in place of crests for debt exactions. Names, like crests, were clan property and were not supposed to go outside the clan. An interesting case of name adoption occurred at Klukwan. It happened that a Chilcat Indian was engaged by Lieutenant Schwatka as a guide when he made his famous trip into the interior. Schwatka had promised the



Indian a certain sum of money which, it is said, he did not pay. The Indian promptly took Schwatka's name, which is still in use among the people of Klukwan. The name is now pronounced Swatki and is of great importance in the Daklawedi clan of Klukwan. During wars between clans, names and even crests were taken in payment to bring about the equality which is a prerequisite of peace. Names sometimes remained permanently in a foreign clan, but crests were sooner or later brought back.

The above is a brief summary of the main types of Tlingit crimes and their punishment. From this summary certain social characteristics stand out prominently. The first of these is the importance of a clan as a sovereign group. The second is the importance of individual status. How crime is to be punished depends largely upon the rank of the criminal. Men of high rank could often escape death through a payment of goods. Every man and woman had a valuation in terms of goods. As the status of a clan was judged largely by the amount of goods it gave away at its last prestige potlatch, so was the status of an individual determined by the amount of goods he gave for his wife. The bride price evaluated both the husband and the wife. The bride price formed the basis for settlement made in terms of goods. There were no fixed fines, since the bride prices varied with the wealth of the community and the status of the individuals. There has been no attempt made here to describe actual punishment in terms of such and such a quantity of goods, but rather the social forces governing the amount of goods given in reparation for the crime.

Closely allied with the criminal act was the shameful act. The fundamental differentiation seems to be determined by the type of social prohibition. Criminal acts were politically or legally prohibited, shameful acts were connected either with etiquette, morals, religion, and economy, or all combined. For the purpose of this paper it is also important to differentiate the criminal act from the shameful act on the basis of the nature of the punishment. While crime was punishable by measures taken against the life and property of the individuals of a clan, the shameful act was punished by ridicule. But so effective was ridicule, that the performer of a shameful act, as in the case of blunders at ceremonials, often died as a result of social disapproval.

We must here distinguish between acts that brought shame to the performer and acts that were performed to shame someone else. One could shame an important chief by seating him in a corner or by calling him by his boyhood rather than by his honorable name. But these were crimes and might lead to serious difficulties between the clans of the respective men. Any crime, of course, brought shame to the injured clan. It is the act shame-

ful to the performer that is under consideration here. Among the Tlingit propriety was of the utmost importance. The anyeti or nobility thought of themselves as being eminent because they and their ancestors had never performed shameful acts. An important man could permanently lower himself by repeated shameful acts. Quite often men destined for chieftainship were ignored because they had in some way shamed themselves.

A member of the anyeti would shame himself if he fell down in public, or otherwise bruised or injured his person. He would shame himself if he were caught doing menial labor, such as cleaning fish or carrying wood or water. He would be shamed if he were caught in an altercation with a slave or a man of low rank, or if he were caught seated in a sprawling position, or if he went to an important meeting without the proper clothes. In every case ridicule could be heaped upon him but the important man prevented this by giving a feast, inviting all the individuals who had seen him. This saved his honor, for it was a great shame to ridicule one's host.

Among the Tlingit one could enjoy the hospitality of a member of his own phratry for an unlimited length of time, but it was considered a great shame to abuse this hospitality. It was shameful to publicly dispute the word of a man older than yourself. It was shameful to have sex relations in your own clan with a woman of inferior rank, but not necessarily so if the woman was of your own rank. It was shameful to be seen near your mother-in-law. Individuals of high rank were shamed if people of low rank saw them nude. It was shameful to be seen defecating or urinating, but it was not shameful to talk about these things in public, nor was it shameful to talk about sexual matters. It was also shameful to break the customary ways of hunting, fishing, and eating.

A shameful act was generally sufficient reason for preventing people performing it. But among the Tlingit, as among other people, there were certain individuals who dared shame in order to gain their ends. It was these who were brought to terms by ridicule. Ridicule had many forms. The most effective consisted in making the offender of the proprieties the laughing stock of the village by disseminating songs and stories about him. Such songs and stories were often composed by paid song makers. Another form was the making of ludicrous wooden likenesses of the offender and placing them in prominent locations. Sometimes elaborate totem poles were carved with this motive in mind. Mimicry was also resorted to in bringing an offender to terms, or he might be called a white man, which every Tlingit considered the height of public censure.

Another point worth stressing is the fact that the criminal was per-

mitted to be at large pending the settlement of the crime, while the injured party always remained indoors until his honor was cleared.

There are other social usages that are so closely connected with crime and punishment that we must discuss them here. The Tlingit used the sweat bath primarily for cleansing, curing, and for shamanistic performances before a war, but it had another function as well, that of a kind of court house.

Among the northern Tlingit the sweat bath was an excavation in the floor of the house into which heated stones were thrown. They then went in and sat on a platform, covering the opening with a mat. Water was thrown on the hot stones to create clouds of steam. Among the southern Tlingit the sweat bath was a corner of the house walled off for the purpose. There was nothing sacred about the sweat bath, both women and children were permitted to use it, and when it was not thus used it was a store room.

When one of the important house owners wanted to discuss clan matters with other elders of the clan, he would prepare his sweat bath and invite them. While in the bath they carried on their discussions, and if there were any young men in the clan who were misbehaving, they were called in and reprimanded. These admonitions revolved largely around marriage regulations, which demanded that a man marry a girl equal in rank to himself.

Witchcraft and shamanism were also closely connected with crime. Sorcery was a powerful method of working harm to individuals. The Tlingit believed that people could be harmed if a certain procedure was followed. Thus if a piece of some dead person's body, such as a bone or hair was put into a man's food, he would become ill. Performing spells over objects closely associated with a man's body could also bring him harm. Some sorcerers could inject sticks or stones into a man's body to bring about illness or death. A sorcerer could also bring one bad luck in hunting, fishing, or in love, and could even make another person commit crimes such as stealing or murder. Most members of a Tlingit community went about in great fear of witchcraft. It was said that if a sorcerer were discovered in action he would be killed immediately by his own clansmen. An interesting fact is that no informant had ever heard of a witch or sorcerer being caught in action. They were always caught by the aid of dreams or by engaging a shaman.

If a man believed that he was bewitched he would take careful notice of his dreams. If he observed, in his dream, an individual trying to hurt him, then that individual must be the sorcerer, and steps would be taken to

bring about the death of the evil doer. In cases when dreams failed to reveal the sorcerer, the shaman would be resorted to. The shaman would hold a performance to discover the sorcerer. The unfortunate man would then be tied with his hands and feet together behind his back and left on the beach or thrown into a pit where he died, or he might be killed outright by being choked to death between two logs.

The employment of shamans in the discovery of crimes such as murder and stealing lent itself to abuse among the Tlingit. Men would steal and later claim that they had been bewitched by a slave and thus escape the penalty. Rivals were often exterminated by paying the shaman to name them as sorcerers in cases of murder where the murderer escaped detection and in cases of illness.

Taking into account the importance of status and the use of shamans in crime detection, it appears that there was a law for the strong and a law for the weak. Men of high rank and great wealth could, through the shaman, commit crimes and still escape punishment. People of low status and slaves were in constant fear of the powerful families and the shamans they employed.

There is still another phase of the Tlingit legal pattern which must be discussed, namely the peace dance. After the settlement of a dispute by execution or by payment of goods, the whole matter was closed by a peace dance.

The whole village attended the dance, which was usually performed in the open air. The two performing clans lined up opposite one another and each picked out a number of messengers and attendants. Then the important men on each side called out, "Come exchange with me." Four men of high status would volunteer from each side. Then the messengers dashed across to the opposite side as if to attack and brought in the hostages who had offered themselves. After this exchange the attitude of the performers changed. Every act then symbolized peace. The hostages were called *kowakan*, "deer," because the deer is the most harmless of animals. Each hostage took a special name signifying peace, humility, happiness, and plenty, such as "woman," "salmon-trap," "humming-bird," "robin." They fasted four days in the houses of the most important chiefs or clansmen. They were not permitted to do anything for themselves, having attendants. On the fourth day their fingers were tied together and they ate with their left hands, because the left hand was weak in fighting. Their food was eaten from stone slabs, to signify that peace would be lasting. The hostages were at first dressed poorly and sang sad songs. The nature of the songs revealed the mood of the two clans, and the natives listened closely to them

to tell if both parties were satisfied or still bearing ill will toward one another.

During the last day the hostages put on the clothes representing the objects after which they were named. Then they spoke to the clans, addressing themselves to the daughters of the clans, thus showing the highest respect. The hostages then danced, imitating the person, bird, animal, or object after which they had been named. After the dance, eagle down was placed on the heads of the hostages as a token of peace, and the messengers led them back to their own clans. In this way peace was publicly proclaimed and settlements took on the weight of public sanction.

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OCCUPATIONAL RITUAL, BELIEF,  
AND CUSTOM AMONG  
THE OVIMBUNDU

By WILFRID DYSON HAMBLY

WHEN leader of the Frederick H. Rawson-Field Museum Expedition of 1929-30 one of my chief objects was the assembling of a representative collection of the arts and handicrafts of Angola, and particularly of the Ovimbundu who occupy the Benguela highlands.

The Ovimbundu have been in contact with Europeans for three centuries at least, therefore I was interested to know to what extent daily avocations had become secularized. That a close connection has existed between the sacred and the profane in Negro tribes is well known, and the influence of spiritual beliefs and magical acts in every department of economic life, including agriculture, hunting, fishing, and handicrafts, has been established. But how durable is this dependence of economic life on magical acts and ancestral benediction? How soon does primitive economic life become commercialized on a European pattern?

Other observations of academic interest and practical value relate to division of labor between the sexes, specialization by age and natural aptitude; also the possibility of some callings being of an hereditary nature.

My observations, which were made chiefly in the regions of Bailundu, Elende near Cuma, and Ngalangi, are conveniently classified under the headings of food supply, handicrafts, medicine-men, and education.

FOOD SUPPLY

At the foundation of economic life is nature lore, which among the male population of the Ovimbundu is so detailed and extensive that the knowledge has given rise to a large vocabulary. The highly specialized acquaintance with trees, plants, birds, mammals, and reptiles on the part of most of the men was a surprise to me. Such information was commonly shared by males, and was in no way peculiar to the professional hunter.

I was easily able to collect a list of fifty birds which are readily distinguished by boys (who shoot them with blunt wooden arrows), and all men seemed familiar with forty species of trees, whose timbers, barks, and fruits were distinguished and named. Boys were exceptionally well acquainted with small mammals; including several kinds of rats and mice, which are trapped, boiled, and eaten. For Field Museum I made a collection of snakes and lizards; a task which again showed the native power of observation and adequacy of vocabulary. Some reptiles, whose re-

semblance for a time caused confusion in my mind, were well known to be distinct; though occasionally a prolonged and serious argument would arise among the old men respecting the correct Umbundu names for two similar snakes.

The cries of birds are interpreted in terms of human conversation; thus the female hornbill says to her mate, "I'm going; I'm going; I'm going to our village;" to which the male replies, "Don't go. The rain has come; let us plant." Another bird says, "Where will the guests stay? where? where? where?" This is an intimation that strangers will visit the village. All animals play a part in folk stories: human beings when introduced are usually of secondary importance.

Nature lore is, of course, fundamental to industries, since the artisans must know the best timbers for particular purposes. Thus certain woods yield the best charcoal for a blacksmith's forge; other woods are essential for house building because the timbers resist attacks of termites; again certain trees yield bark for making rope; while other woods are used for carving animals and household utensils.

I am not sure of the extent to which women participate in nature lore; but certainly their knowledge cannot equal that of the men, since women are concerned chiefly with agriculture, domestic work, care of children, and collection of firewood. Yet women and little children are collectors. I have seen many of them together gathering caterpillars which are to be made into soup. Women know the plants that will yield dyes for basketry, and from women some of the bird calls were obtained. The conversation of men bears on their occupations and the nature lore fundamental to these; therefore women must learn, though perhaps only by unconscious absorption.

In connection with a study of food supply the occupation of hunting comes most closely to the general nature lore mentioned above. Here a distinction should be made between hunting as a general occupation for males, and hunting by a professional who gives his life to the work. The only occasion on which women and children assist hunters is during a communal hunt, when all the inhabitants of a village fire the dry grass and aid in the capture of game by shouting and driving the frightened animals.

A professional hunter is usually called *ukongo*, more rarely *onyanga*. The occupation is not hereditary. A boy has to serve two years with a professional hunter before his initiation. The principal guests at the initiation feast are professional hunters, who alone may dance, though a miscellaneous company is present. The boy who seeks initiation is required to keep quite still until he feels the "spirit on his head," then he distributes meat to the people present. The meat used at the feast is that of antelope shot by



A



B

A. Rock tomb of a hunter near Ganda, west-central Angola. The entrance to the tomb is on the right B. Tomb of a hunter near Luimbale, west-central Angola. Trophies of the chase are on the scaffold. (Photographs by courtesy of Field Museum of Natural History, Chicago.)





A



B

A Player of the drum (ocingufu) B Official flute players to a chief at Bailundu (Photographs by courtesy of Field Museum of Natural History, Chicago)

professional hunters, and the smearing of the novice's bow and arrows with blood from the meat is an important point of ritual. The bow and arrows are made by the master for his pupil; a practice strictly analogous to the making of tools for a young blacksmith by the master who has trained him.

In connection with the life and death of a hunter a certain amount of ritual survives, and this despite long European contacts, game laws, and the development of an economic system based primarily on extensive cultivation of maize and beans. But though these circumstances might tend to discourage hunting and its attendant ritual, other facts have contributed to survival. An embargo on guns and powder has led to prolonged use of bows and arrows, with which all hunters are expert, though some, despite official prohibition, have muzzle loading guns. Bows are in general use, and their continuance has no doubt aided survival of ritual, since the rites themselves are closely associated with the bows.

The night before a professional hunter sets out is an occasion for renewal of implements of the chase, that is, renewal in a spiritual sense, by a ceremony designed to transfer power in a magical way from the disused weapons of deceased hunters to the weapons in use. Weapons of dead hunters are kept in a small hut to which a hunter repairs on the eve of departure. He rubs the old weapons (bows, clubs, and spears) with palm-oil, then pours over them a libation of beer. No medicine-man is present, so for the occasion a hunter functions as his own priest.

It is hazardous and perhaps unprofitable to attempt an analysis of the philosophy behind these ritual acts. Yet the weapons are symbols of the personality and prowess of dead hunters whose names they have received. Therefore the suggestion that the hunter is acquiring power from the dead is reasonable, and the idea harmonizes with all that is known of ancestor worship among Bantu tribes.

The food and cooking pots of a hunter must never be associated with those of ordinary household use. If a hunter is following the tracks of an animal he may not point with his finger, since this action will drive the animal away. He may, however, point with the feathered end of an arrow. A dog must have his ears clipped in a peculiar way or he will not hear and obey. A hunter may not sleep with his wife the night before setting out in quest of game. Before leaving home a hunter washes his eyes with a concoction of herbs to give greater acuity of vision.

In any village the hut of a professional hunter can be readily distinguished by a number of poles erected near the entrance. On these supports are placed the skulls of animals killed in the chase. A traveler cannot fail

hollow chamber. I removed a thin slab of stone which formed an entrance to a tomb of this kind and observed within two skeletons lying supine. On the top of the cairns were skulls of animals killed by the hunter. I noted one instance of the burial of a hunter's dog under a cairn of stones.

Three birds are protected by a prohibition. *Esuvi* is a bird which has power to steal the souls of the dead, so making them die a second death. As usual, no direct explanation was given concerning this second death, but an explanation came later, quite fortuitously. For instance, an old man said he was sick because *esuvi* had stolen the spirit of his grandfather. This statement is logical, since welfare depends on a beneficent interest of dead ancestors, and it is evident that dying a second death prevents a spirit from exercising a benign influence over the living. Other protected birds are one which supplies feathers from which the decorations of kings and medicine-men are made, and one whose night cry is a warning of death in a village.

In fishing, a division of labor is recognized: men use a rod and line, while women drag baskets against the stream or use poison in slow, shallow water. The night before poison is to be used for fishing, husband and wife must avoid intercourse, since intimacy of this kind would make the fish stay together at the bottom of the river. A man who has prepared his rod and line, by transfixing a grasshopper and attaching it to a thin piece of bark, sings a song which is of the nature of a spell. He says:

"O fish come and take your good thing  
Do not send the little fish to spoil the good thing.  
Better you come and take the good thing with all your strength."

Up to half a century ago the Ovimbundu were renowned traders whose caravans penetrated deeply into the Congo region and even to the east side of Africa. It is natural, therefore, that some ritual should be connected with such an important enterprise. At the present day caravans may be seen, but these are local, and most of the carriers are found to be taking their maize, beans, and beeswax to traders' stores. I believe women did not accompany the transcontinental caravans of early days, but today women may be seen in line with the other carriers. Their loads are lighter, being on the average thirty pounds as compared with sixty pounds for a man. Children also carry small loads in the caravan.

Ngonga, my chief informant, said that in former times no caravan leader would set out without having consulted the preserved head of a deceased king. Even at present the corpse of a king is suspended by the neck and twisted until the head is severed. The head is sewn in oxhide and preserved in a box. The ancient caravan custom consisted of taking the box

containing the head and attaching it to a pole by which it was supported on the shoulders of two bearers. Then followed a series of questions from the village chief (*sekulu*), and answers were supposed to be given through forward or backward swinging of the pole. A forward swing was affirmative, and a backward swing was negative. I have seen this procedure followed with a coffin supported as described, and the questions related to the cause of death.

The head of a king would be asked, "Do you want an ox for sacrifice? We will give you one." "Do you want a new skin for your head? We will give you one." Such was the ceremony for bringing spiritual aid to what was otherwise a commercial undertaking.

A wooden figure of a female decorated with black feathers was an indispensable part of the equipment of a medicine-man who accompanied a caravan. When in doubt with regard to the path he knelt at the parting of the ways and consulted the figure. Replies came in a falsetto voice attained by plugging his nostrils. Horns containing a mixture of fat, charcoal, and other substances were carried so that they might be planted near a camping ground to drive away thieves and leopards. These horns are still used and are obtainable.

At the present day a belated Ovimbundu, who fears the sun may set before he reaches the next village, will take some earth from an ant hill. This earth he places in the fork of a tree saying, "O sun wait for me a little while."

Examination of the culture of the Ovimbundu, combined with observations on the Umbundu language and somatic traits, indicate that the Ovimbundu are a part of the Bantu peoples of southwest Africa. They have, however, taken advantage of the open Benguela highlands to develop their system of agriculture far beyond that which is usually carried on by Negroes in forest clearings.

In agricultural work a clear division of labor is observed. Men clear timber and burn the bush, after which hoe cultivation is in the hands of women, though men assist with the harvest. Unmarried girls help in the fields and each has a piece of ground whose products are the cultivator's personal property. This gives unmarried girls a measure of economic independence. Usually a girl spends the proceeds of her work in buying trinkets and palm-oil for personal decoration. Under their system of polygyny each wife has her own field, utensils, and a separate hut with its fire and cooking arrangements. The husband visits each hut for four consecutive nights, though in some districts there is a seven night cycle. Men always take evening meals in the mens' council house (*onjango*) in the center to notice the tombs of hunters, which consist of cairns of stones enclosing a

of the village. The meals are brought there by those wives who are at the time cohabiting with their husbands. But an exception is made in case of menstruation, for a woman is not allowed to cook or handle food during her period. At such times the preparation and transfer of food is carried out by another wife, and of course the time comes when such a service can be required. I found no survival of agricultural rites such as offering first fruits or other similar ceremony.

In some tribes of Sudanic and Bantu Negroes agricultural rites are important in relation to sowing and harvest, since land is in the first place the property of dead ancestors, but so far as my inquiries go such rites are not now known to the Ovimbundu. Maize may be pounded only on rocks that have been consecrated by the medicine-man: he kills a chicken and sprinkles the surface of the rock with its blood. Only women may pound corn, and a youth who persisted in dressing as a woman and pounding on the rocks was beaten by his relatives. This information gave a clue to homosexual practices, but the information obtained was meager.

In connection with the care of domestic animals many tempting digressions present themselves, but I am concerned only with beliefs, ritual, and division of labor. Chickens are of ritual importance since they provide the least expensive sacrifice, and in connection with industries the peculiar use of chickens will presently be mentioned. For sacrificial purposes a goat is preferred to a sheep since it makes more noise, but the reason for this is not clear, though making a surmise I would say that the noise better appeases ancestral spirits to whom most sacrifices are made. Pigs are kept, but I did not hear of them being used for sacrifice. The animals so far mentioned have little or no attention. Goats fend entirely for themselves, so also do sheep. Chickens receive maize from women and children, who also gather the eggs. Pigs receive maize and mush from cooking pots or that discarded in making beer, but they depend largely on foraging in refuse pits.

The castration of pigs and bulls is the work of a male specialist who receives a fee of four yards of cloth for operating on the latter animal, but only a small gift of tobacco or similar recognition for castrating a pig.

The Ovimbundu have acquired cattle of the long-horned Damara breed, and in connection with the care of these some important points of ritual and division of labor should be recorded. The herding of cattle is exclusively the work of males, and I am not aware that women have any tasks connected with cattle. Only in recent times have some male owners of cattle begun to milk the cows. This they do somewhat stealthily, deceiving the cow from time to time by allowing the calf to suck for a few moments. If asked why milk is not used, the owners say that calves deprived of suck-

ing become thin; but avoidance of milk is really one of those deeply rooted food prejudices which even the people themselves could not explain if willing to do so.

The Vakuanyama of south Angola make butter by swinging two large calabashes on a pole, but though this practice is known to the Ovimbundu, they do not imitate the method. The flesh of cattle that have died from disease or accident is eaten, and uses are found for the hide, tail, and horns. But cattle are not slaughtered except at a funeral feast, after which the horns are mounted on a pole over the grave, and perhaps the skulls are preserved near the site of burial.

Cattle serve as fines, sacrifices, and gifts, including a bride's dowry, but the social and religious importance is greater than the economic use. This is in accordance with what might be expected, since the pastoral activities of the Ovimbundu are but an adopted series of traits which can be found among numerous pastoral tribes of southwest, south, and east Africa. Wrapping the head of a king in oxhide which is ceremonially renewed has been mentioned. In addition to this rite, the use of oxhide bracelets by mourners, and the use of an oxhide shroud for chiefs and kings, must be recorded. Use of ceremonial fire which is distributed from the chief's house when a new village is founded, and creation of new fire after epidemic sickness, are Umbundu traits which form part of the typical pastoral culture elsewhere.

Consideration of food supply has indicated the preservation of ritual and belief, not intensively, but with sufficient force to show great tenacity of indigenous culture in the face of prolonged and disturbing intrusions.

#### HANDICRAFTS

Incomparably important is the craft of the blacksmith. The preservation of ritual and belief was at once suggested by the workers' refusal to sell me any of the tools, especially the large hammer (*onjundo*), although the sum offered covered the value of the implements and the time lost in making new ones. After three months I acquired a large hammer from the wife of a blacksmith who had not worked at his trade for many years. She parted with the tool in the absence of her husband, but demanded a sum which would have purchased an ox. Other tools were made for me.

Information respecting the blacksmiths' ritual was given in the village of Njongolo in Elende, but I am informed that the beliefs are general, and they are certainly compatible with all that is known of blacksmiths' ritual among Bantu Negroes, Sudanic Negroes, and Hamiticized Negroes of east Africa. I found no mining of iron but saw a site where the ore was for-

merly obtained. Blacksmiths now smelt scrap-iron from European sources.

Among the Ovimbundu, blacksmiths are restricted in marriage only by those kinship laws arising from their classificatory system of relationships, and the operation of a system of cross-cousin marriage. The smiths are not an endogamous group, and the occupation is not hereditary.

But despite these differences, which are not quite in harmony with the general body of custom relating to Negro blacksmiths, the Ovimbundu preserve ritual which is part of a widely distributed attitude toward workers in iron.

When a boy begins his training he should be about eighteen years of age and physically robust. He is required to collect and soften fragments of iron in the charcoal fire, to work the bellows, and to beat iron on the anvil, but for a time he is not allowed to make implements, the chief of which are hoe blades and axe heads. At the end of two years the novice asks his master to examine him, and preparations are made for an inauguration ceremony should the youth have proved sufficiently skilled to become an independent blacksmith.

On the day of initiation the boy has to buy four chickens, two male and two female, one pup, and a goat. The master blacksmith has already made a complete set of tools for presentation to his pupil, but the big hammer (*onjundo*) is not quite completed until the day of initiation. While the final touches are being given to this object the novice stands still on a small stone anvil which is situated between the forge and the large anvil.

When the hammer is completed, and while it is still red hot, it is thrust into the belly of the pup provided by the novice. The goat and the four chickens are killed and some of their blood is sprinkled over the new tools which are gathered in a heap. The blacksmiths invite their friends to feast on the flesh of the sacrificed animals.

The boy remains standing on the anvil until the master says, "You may speak and tell us what name you want." Perhaps the boy says, "I am Ndumbu," then the people clap hands and trill with their fingers in their open mouths. My interpreter said, "The boy will work hard and people will pay him. He used to work hard but his master took the pay."

Near the large anvil may be seen one or more wooden figures which are still regarded as essential to the work of the blacksmith. I was informed that a blacksmith owes his skill to the aid of a spirit of some person he has killed, and that this spirit uses the wooden figure as a dwelling place. If this information is reliable the wooden figure is of the nature of a shrine, but I was not able to learn of any ceremony for inducing a spirit into the wooden figure. The impression left was that the spirit of the murdered person re-

sided permanently in the wooden figure. This ritual murder is now impossible, but the wooden figures are still used in the way described.

Women are never engaged in blacksmiths' work; neither are they employed as wood carvers. Among men wood carving is a specialized occupation, and within the craft itself are men who deal solely with one branch of the work. Thus in a village perhaps only one man is capable of making a drum, while another carves life-like wooden figures of animals, and a third specializes in the fabrication of household implements.

Among the Ovimbundu women are the only potters, but I found just one exception in the case of a man who said that he learned the potter's craft in eastern Angola among the Vachokue. No ritual is connected with the making of pottery, but I observed that women always frequented one pit for their clay and in doing so passed better clay which was more accessible. I learned that a clay pit has to be consecrated by a medicine-man who kills a chicken and sprinkles the blood in the pit. All women at some time learn the arts of pottery making and basketry, but by the process of selection the industries become concentrated in the hands of the most skillful.

Only women make baskets; a craft in which they are skilled, especially in the gathering of plants and the extraction of dyes of soft shades. Such dyes have considerable endurance even though exposed to bright sunlight. Imported dyes are now competing with indigenous products, but the latter are still preferred in most localities. One might expect that women who are skilled in basket making would be expert weavers of mats, but this is not so. Mat making is in the hands of men who are skilled specialists, and within the mat making industry are at least three principal divisions of the craft, one for each type of mat.

Men spin cotton for mending clothes, but I have not seen women so engaged. I did not see any looms in use in Angola, but they survived up to a few years ago, and in the youth of my interpreter, who was about thirty years of age, looms worked by men were plentiful.

House building shows a division of labor according to age and sex. Men are responsible for cutting the poles, digging the trench in which these uprights are set, and binding the cross-pieces with bark. Men are likewise responsible for plastering the walls and laying the thatch. Women carry water to the clay pit and transport the puddled clay to the men who are plastering the walls. Children, some of them so young that they have to be rescued from a swampy grave, delight in puddling the clay with their feet. The rectangular pit is always as near the house as possible in order to minimize the labor of transport. I suggested that some of the tasks should



be reversed and asked whether men could not carry the water. I was told that such a man would be laughed at and called a "he-woman." Yet division of labor does not imply sex inferiority, and ridicule would arise from incongruity.

#### MEDICINE-MEN

The training of a medicine-man (*ocimbanda*) and a medicine-woman (*chambula*) involves few formalities, but this class of work requires that a novice shall have "spirit in the head." When visited by a sick boy the medicine-man shakes his divination basket and if a certain combination of objects appears, he says, "Your father was *ocimbanda* and his spirit wants you." The boy who is thus adopted has to accompany the medicine-man, his master, carrying apparatus and standing near to play a small friction drum while the master is shaking his divination basket.

Specialization among medicine-men is carried to great degree of refinement, especially among those practitioners who profess therapeutic knowledge. I employed three medicine-men to collect plants, of which they appeared to have an expert knowledge. Umbundu names were given and the curative properties of each plant were explained with enthusiasm and evident conviction. The men were undoubtedly sincere in their own beliefs. A specialist who can cure blood in the urine, and another who is said to treat dizziness successfully, are greatly respected. The rainmaker is *ocimbanda opulia*, "the medicine-man of the rain," who dances while flourishing a cow-tail switch, and blowing a shrill whistle intermittently.

*Ocimbanda* is of course distinguished from *onganga*, since the former is concerned with socially beneficent tasks such as those mentioned, while the latter may cause sickness, impotence, and sterility. In earlier days the task of finding sorcerers (*onganga*) by use of the poison ordeal was that of an *ocimbanda*. Medicine-women are called in to take care of difficult cases of childbirth, and I have seen a medicine-woman painting the face of a pregnant woman, who thereafter observed certain taboos.

Space will not permit enumeration of the contents of a divination basket and the significance attached to each item; neither can I give details of ceremonies for curing the sick or bringing a thief back to the village, but the foregoing notes suffice to show that the craft is specialized and still important. A medicine-man ceremonially washes a king or chief on rare occasions. He makes new fire by twirling; though flint and steel, also matches, are known. When a new village is founded a medicine-man stirs the blood of sacrificed animals with the claws of a chicken; then he sprinkles this blood on each new house.

At Caconda I obtained the basket of a medicine-man which contained a human tibia, a hoe for digging in graves, and a round stone for pounding the bone before mixing it with fat and charcoal. Medicine-men still make potions for internal use, and these are usually carried in small horns suspended round the neck, or the paste may be contained in the carapace of a tortoise. In every way the medicine-man is still functioning, and his tasks are fundamental to the social and religious life of the Ovimbundu.

At an early age children specialize in their play which has a bearing on the business of life. Boys make wooden-tipped arrows, play at hunting, and shoot at tubers which are rolled along the ground. Girls take clay from the potters to fabricate their own small cooking pots, and young girls attempt the coiling of basketry.

Men are the musicians, and among these a high degree of specialization is observed. In a large village there are likely to be only a few competent drummers, and only a few men who play the small iron-keyed instrument called ocisanji. Osaka is a ritual game played only by men, and only when a village headman or a king is dying. The ball (ombunje) is made by sewing lizard skin over a hard spherical fruit about six centimeters in diameter. A man continues to dance with this little ball clenched in his outstretched hand, while another dancer hits the muscles of his arm to make him release the ball. This game is thought to give strength to the sick man. There is a transfer of the endurance of the dancers to the invalid.

Preliminary observation in some villages occupied by Ovimbundu is disappointing in its suggestion of Europeanization. The foreign culture is, however, a thin veneer, and further research shows a strong persistence of indigenous custom and belief quite near to centers of Portuguese influence.

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## KUTCHIN TRIBAL DISTRIBUTION AND SYNONYMY

By CORNELIUS OSGOOD

THE misuse of names applied to various divisions of the so-called Kutchin peoples of Alaska and northwestern Canada complicates the presentation of ethnographic data to such a degree that an attempt to clarify the synonymy is highly desirable. These groups of Kutchin people have been referred to as either bands or tribes, a point on which ethnologists may readily disagree, but the latter term seems more correct. Early travelers discovered the word Kutchin and adopted it to refer to the Athapaskan tribes west of the Mackenzie delta with which they came in contact. To these tribes it meant literally "one who dwells" and coupled with a term, generally geographical, served to designate a specific group of people, as for example Vunta-kutchin, "those who dwell among the lakes." Kutchin is therefore comparable to other Athapaskan forms such as gotine, kotana, and xotana, but not as sometimes erroneously supposed with dene, tana, and tnai signifying "man," for which the correct Kutchin form would be dindjie and its variants. Very often the practice of designating a tribe or group of tribes by a term with which the people speak of themselves disconcerts the student by introducing false suggestions concerning the extensions of both language and culture because the term is stretched beyond its own linguistic domain. Of this error, the use of Kutchin is a good example.

In the third quarter of the eighteenth century, while making the first classification of Athapaskan tribes, Dall, who might be called a purist in such matters, admittedly used the term Kutchin in his nomenclature to apply to peoples who did not know the meaning of the word. When he called the Tanaina of Cook inlet Tehanin-kutchin, it partly explains how a later writer could think the word referred to an upper Yukon river tribe. The confusion in this case signifies little, but when demonstrably true of other tribes, it raises the question of who exactly are the people frequently referred to as *the* Kutchin.

Cadzow made a definite contribution in this direction but implied rather than stated certain desirable distinctions. The title of his paper, the "Habitat of Loucheux Bands," deserves a few comments itself for the adoption of the word Loucheux obviously indicated his intention of indicating the real Kutchin people whom I shall call the True Kutchin. I regret introducing more terminology and would follow Cadzow in speaking of "Loucheux Bands" despite numerous objections, had he not included

the Han tribe among them. For the sake of clarity, I mention here that I think his bands are tribes.

More important is the fact that the term *Loucheux* means to some only one or two Kutchin tribes living near the Mackenzie delta. This results from the circumstance that our earliest sources of information concerning the Kutchin come from the explorers who met only the easternmost groups and called them *Loucheux* or *Squinters* after the French fur-traders. Franklin (p. 23) says the name originated in an attempt "to convey the sense of the [Hare] Indian name of the tribe—*Deguthée Dennee*, which means 'the people who avoid the arrows of their enemies by keeping a lookout on both sides.'" Petitot (*Monographie*, p. 28), however, among the several native names he gives for the Peel River Kutchin, lists *Dak-kadhe*, which he translates "*louche*." Richardson (I:378) says the same tribes are the *Di-go-thi-tidine* of the Hare Indians. *Loucheux* also characterized the Kutchin near the Mackenzie river to Murray (p. 83), for he remarks while on the Yukon river: "The *Loucheux* Indians and those here speak the same language. . . ." Later, however, the term developed the broader meaning of Kutchin and was so used by Murray, Kirby, Hardisty, Dawson, and finally Cadzow. The expression *Tukudh* has some currency among the whites of the country as an equivalent of Kutchin. This has been carried over from the more particular reference to the Upper Porcupine River Kutchin because the Bible happened to be translated into their language. Mason (p. 12) is the only one I know to have so used it in print. To complete the data on this particular point, Mackenzie, the first white man to see these natives, called them "*Quarrelers*" but the name did not catch and soon gave way to *Loucheux*.

To approach the problem of synonymy afresh, I wish to present the data acquired from a number of Kutchin informants during field work among those people in the summer of 1932. They originated and substantiated independently without contradictions, the following list of tribes which I give first according to simple English geographical equivalents.

THE TRUE KUTCHIN TRIBES

- 1 Yukon Flats Kutchin
2. Birch Creek Kutchin
3. Chandelar River Kutchin
- 4 Black River Kutchin
5. Crow River Kutchin
6. Upper Porcupine River Kutchin
7. Peel River Kutchin
8. Mackenzie Flats Kutchin

The accompanying map indicates approximately the range of these tribes at the time of the first European contact. (See fig. 1). Informants agreed that linguistically, physically, and culturally these people felt themselves related to the exclusion of all others, whether called Kutchin or something else. Dr Edward Sapir is authority for stating that especially on linguistic grounds these people form a distinct unit, their speech varying most greatly from all other northern Athapaskan languages.

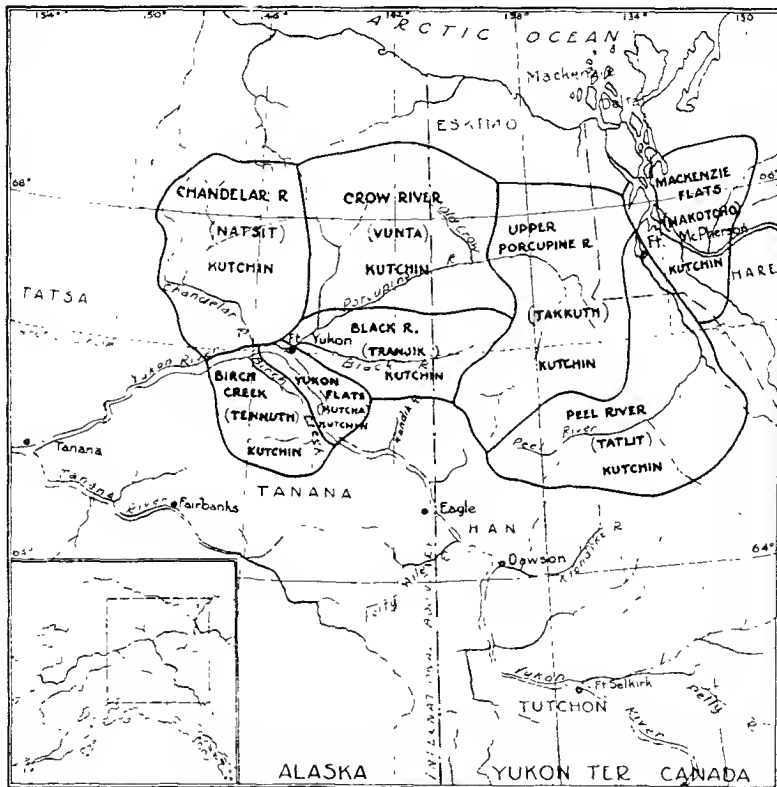


FIG 1. Distribution of the Kutchin tribes

Despite this general similarity differentiating them from outsiders, they show too much contrast among themselves, however, to be called bands. Geographically they form distinct entities with cultural differences frequently reflecting very divergent environmental conditions. Their territory compares in size with New England and probably some of the groups, primarily endogamous, seldom if ever met, or if they did, were

unable to talk to one another without difficulties. And yet the eight tribes recognized a relationship which united them into what I think might be called correctly enough a nation.<sup>1</sup> No attempt will be made to estimate the population of the tribes, for the evidence is extremely unsatisfactory.

The more specific confusion in terminology concerning the Kutchin arises out of the use of the native designations for tribes. When one informant supplies such information, he naturally gives them all in his own language and their translation may lead to complete errors on his part or that of the inquirer. Thus when a parallel list shows differences due to dialectic variations, incorrect translations, and peculiar transcriptions, chaos follows inevitably. A complete set of terms made in each tribe would be ideal, but neither necessary nor now possible. The matter is untangled for ethnographic purposes by comparing the data on each tribe.

1. *Yukon Flats Kutchin*.—My informants of the Chandelar, Crow, and Peel River tribes all gave the term as kwutč'a (preceding kwutč'an, of course, which, to save needless repetition, will not be added here), translating the whole as "those who dwell on the flats." This name accurately describes the locale of the tribe, for the Yukon river widens out through their territory into a lake-like stream, sometimes fifteen to twenty miles wide, filled with a myriad of sandy islands overgrown with willows and some trees. The Yukon Flats Kutchin ranged along this Yukon valley from the widening of the river a few miles above Circle, to about Birch creek below Fort Yukon, both these settlements lying within the Kwitca country. Now at Fort Yukon only one family remains which really belongs to this once populous tribe.

The Handbook of American Indians (I:739) lists the tribe as Kutcha, a common variant, giving "giant people" as the translation, an error borrowed from Petitot (Monographie, p. 28). In the synonymy seven terms beginning with the letter I and one with E are variants of a generic Eskimo term applied to any neighboring Indian and should be given, if at all, under the general heading Kutchin. Cadzow (p. 173) called the Yukon Flats Kutchin "ragged people" because the lack of caribou in their country left them poorly supplied with clothing. Morice (p. 26) translates the name as "people who are against (i.e., act differently from others)." Dall (p. 30) says it means "Lowlanders," a correct enough interpretation.

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<sup>1</sup> "NATION: A people connected by ties of blood generally manifested by more or less community of language, religion, and customs, and by a greater sense of common interest and interrelation than exists between them and others" See Webster's New International Dictionary

2. *Birch Creek Kutchin*.— My best informant, a very old man of the Crow River tribe, insisted on the inclusion of this group, which he called *de ndu*, "those who dwell on the other side (i. e., of the Yukon river)." Their habitat was the region of Birch creek, a stream flowing from the southward into the Yukon about twenty-five miles below the mouth of the Porcupine. They spent most of their time in the mountains, which characterize their territory and mode of life in contrast to the last-mentioned tribe, who were essentially a river people. This tribe is long extinct and consequently little remembered. Cadzow fails to place it on his map.

Dall undoubtedly refers to them by his *Tennuth*, the "*Gens de Bouleaux*," or "*Birch Indians*" of the Hudson Bay men. He says,

These people with the *Tatsah-Kutchin*, comprised a few bands of Indians allied to the *Kutchah-Kutchin*, who formerly wandered in the region between the rapids of the Yukon and the mouth of the Porcupine River, having their principal hunting ground near the Small Houses. About 1863, however, they were all swept off by an epidemic of scarlet fever, introduced through contact with the whites, and there is now not an individual living of these two tribes (p. 30).

His statement corroborates the information about the Birch Creek people, but I believe he was mistaken in including the *Tatsah* in the relationship to the *Kutchah*, for *Tatsah* probably refers to the first of the non-Kutchin tribes in this direction.

3. *Chandelar River Kutchin*.—This I recorded as *neD'su* from a Crow River informant and *net'sut* from Peel River. The name was translated as "those who dwell off the Flats (i. e., Yukon river)." The early traders called them the "*Gens du Large*," which, corrupted to *Chandelar*, became the name of the river flowing through their territory, which lies to the north of the great bend of the Yukon and extends into the barren grounds. This latter environment patterns their culture such as to distinguish them from the Yukon Flats and Birch Creek Kutchin.

Richardson (I:399) called them appropriately the "people of the open country." Dall (p. 30) and Cadzow (p. 177), however, said the name meant "strong people," and added that they were distinguished by their trade with the *Kangmaligmut* Eskimo and by the manufacture of strong *babiche*. The rendering of the term probably resulted from a confusion between the meaning of the native word and the fact that neighboring tribes attributed great strength or endurance to these people as a consequence of a strenuous life on the barrens. Cadzow also states that they were called "*les Grandes Gens*" by early voyagers. Petitot (*Autour de Grand lac des Esclaves*, p. 361) mentioned them as "people who dwell far from the water."

4. *Black River Kutchin*.—Given by all informants as *trandjik*, "one who dwells along the river (i. e., the Black river)." The name refers to a tribe occupying the country around the Black river, which flows roughly parallel with the Yukon and empties into the Porcupine a few miles above the mouth of the latter stream. Strangely, except for Hardisty and Cadzow, I have not found reference to these people in the literature, the Handbook not excepted. It should be noted, however, that the Handbook does list erroneously Hardisty's term *Tran-jik* as a synonym of *Trotsik*, the latter being certainly a Han tribe.

Southwards [says Cadzow (p. 177)], along the headwaters of Black River, are found the *Tranjik-Kutchin*, the "Cache River People," who take their name from the number of caches or stages built along the stream on which they live. It was on the headwaters of this river that representatives of the bands met in council every few years in ancient times, and while there built the caches upon which they stored their food and belongings.

Probably Cache river is *the river* of my informants.

5. *Crow River Kutchin*.—*vante* of themselves, *vuntat* of the Peel River Kutchin; translated as "those who dwell among the lakes," refers to the many lakes spotting their country around Crow river, which flows in a southerly direction and empties into the Porcupine just above the point where the latter crosses the Canadian boundary into Alaska. This is one of the best known of all the Kutchin tribes, but special note should be made of the confusion in the first paragraph of the Handbook (II:882) due to an error by Schmitter (p.1), who confused them with the Han tribe, saying that the Vunta traded at Fort Egbert, and formerly at Fort Selkirk, Pelly Banks, and Francis lake. His rendering of the name as "People of Willow Creek" is part of the disorder which with his other data mixes up the whole account.

Murray (p. 56, 58) gives the name correctly as "people of the lakes" but also says that they were called "Rat Indians" by the Peel River Kutchin. Petitot (*Monographie*, p. 28) lists two terms "*Voen*, lake" and "*Zjen*, rat." The double terminology may have come about because of the fact that one of the tributaries of the Porcupine is called Rat river. Dall (p. 31) calls them "Rat People," as also does Cadzow (p. 176), who adds that they "received their name from a legend in which the great chief of the muskrats chose their country for his home," an explanation that sounds as though it probably originated from the variety of flood myth told throughout the whole area. Morice (p. 27) mentions both terms, rightly indicating that the former is a proper translation. The significance of the



controversy lies in the fact that the Upper Porcupine River Kutchin are mentioned sometimes also as "Rat Indians."

6. *Upper Porcupine River Kutchin*.—*dagə* of Crow River Kutchin. *takə* of Peel River Kutchin. My informants did not know what the name meant, or rather, to be more exact, insisted no meaning existed. These were the true Loucheux of many writers and perhaps the interpretation should be "squinters," as given by Petitot (*Monographie*, p. 28) and the *Handbook* (II:834). The tribe occupies the mountainous country around the headwaters of the Porcupine river. Even apart from the general term Loucheux, they are mentioned most frequently of all the Kutchin tribes.

Hardisty (p. 311) and Dall (p. 31) following Ross called them "Rat Indians" and I also think they were the real "Rat Indians" of the early traders, who later probably extended the name to the Crow River Kutchin. Petitot (*Monographie*, p. 28) lists as synonyms besides "Dakkadhé. louches," "Tdha-kkè, gens des montagnes," and "Klo-vén, gens du bord des prairies," of which I know nothing. Cadzow (p. 176) refers to them as Tukudh or "Mother people," explaining that it is from this group, according to legend, that the other Kutchin are supposed to have sprung.

7. *Peel River Kutchin*.—*tet'let* of themselves; *təlet* of the Crow River Kutchin; translated as "those who dwell at the source of the river (i.e., the Peel)" which designates the country they occupy. The little information on this tribe is consistent. Within the memory of informants, the people descended to Fort McPherson annually in the spring and during the summer hunted caribou in the mountains on the west side of the lower Mackenzie delta. This, however, possibly represents an extension in territory covered following the settlement and the enforcement of peace by the whites.

8. *Mackenzie Flats Kutchin*.—*kwutč'a* of all informants, meaning "those who dwell on the flats," and identical with the term for the Yukon Flats Kutchin. The geographic similarity of the two regions has resulted in two tribes being called by the same name. About the Mackenzie delta people there is some confusion, due to Petitot (*Monographie*, p. 28) having listed two groups for this area: the Kwitcha or "habitants des steppes de l'Océan glacial, entre l'Anderson et le Mackenzie" and the Nakotchoondjig or "gens du Mackenzie." The only territorial difference I can distinguish between them is the placing of the latter on the Mackenzie proper and the Kwitcha farther east. Cadzow (p. 175) mentions only Nekwichoujik or "Big River People" and locates them as does Petitot. The *Handbook* gives identical ranges for both Kwitcha and Nakotcho. I think the two are really the same for the following reasons: all my informants from

the Mackenzie as well as the Yukon side both consistently included Kwitcha and failed to mention Nakotcho or a phonetic equivalent: if, as Petitot implies, the Kwitcha live farthest east, it seems strange that my informants would name a more distant tribe to the exclusion of a nearer one: Kwitcha more truly describes the Nakotcho territory than the eastern country: and Cadzow's single term Nekwichoujik looks like Kwitcha with a prefix and suffix added. Despite my evidence, the authority of Petitot in the Lower Mackenzie demands further study in the region itself, which may lead to a subdivision of my eighth Kutchin tribe.

THE SO-CALLED KUTCHIN

Atai-Kutchin of Cadzow  
Bâtard-Loucheux  
Han-Kutchin  
Upper Yukon Kutchin  
Lower Yukon Kutchin  
Tanan-Kutchin  
Tehanin-Kutchin

*Atai-Kutchin*.—Cadzow (p. 175) places on his map a group named Atai or "Mountain People" and says they lived "inland from Mackenzie River, in the high mountains east of the Tetlet-Kutchin" and that "they were called Ditcheta-ut-tinne, 'Strong Bows People,' by the early Hudson's Bay Company's voyageurs." These, I think, should be allied with the several other mountain tribes west of the borders of the Mackenzie which certainly are not Kutchin.

*Bâtard-Loucheux*.—These I mention only for the sake of consistency and because the name might be confusing. They form one of the Hare bands listed in the Handbook (II: p. 54) as Nellagottine.

*Han-Kutchin*.—This name, applied by the True Kutchin and meaning "those who dwell along the river," refers to the people just above them on the Yukon river. The exclusion of this group from the True Kutchin is based on the following evidence. All my informants, both of the Han people and of those previously considered, felt that the Han, on the basis of language and a feeling of common interest and interrelation, formed a unit comparable to that made by the eight tribes described above. As far as I could discover, the Han people know the word Kutchin only as a term applied by their neighbors. Dawson (p. 203B) thought so too.

Murray (p. 83) noted a difference in their language and Hardisty (p. 311) says,

All the tribes inhabiting the valley of the Youcon understand another; a slight difference of accent being all that is perceptible in their respective dialects. The first material change occurs among the "Gens de Fou" or *Hun-koo-chin* (River people).

Allowing that the Han should not be classed as True Kutchin, the next question asks, who then are they? According to information gained among them, the Han people are divided into two bands, or tribes, one centering around a notable bend of the Yukon where the settlement of Eagle has been established, and the other at the mouth of the Klondike river where Dawson now stands. The latter people since the gold rush, however, have been moved to Moosehide Reservation, three miles below the European town. One of my Peel River informants living among them calls the former *tcitatetle* and the latter *tyatcuk*, "mouth of the Klondike." My only authoritative Han informant who was old enough to be interested in actual terminology, stuttered extraordinarily (one of the two Athapaskans I have known to suffer thus) but conveyed the corroborating fact that there were two groups of the Han, the first name meaning "people of the eddy" (Eagle), and the second was the name of the Klondike river. Another informant gave me *θetahvkl* for the Eagle people and said it referred to the eddy there. Such information which might seem so easy to discover is, with poor informants, extremely difficult to determine accurately because of a confusion with general place names. The historical data throw light on the problem, however.

Adney (p. 495) who lived among the Klondike people for a season, calls them *Tro-chu-tin*, presumably their own term, which is recognizably close to *tyatcuk* with a familiar Athapaskan but non-Kutchin ending. He adds that they are better known as "Klondike Indians" which leaves no doubt that they were Han people. Murray (p. 61) speaks of the Han as "*Gens du fou*," mentioning an "upper band," which signifies a dual division.

The Handbook (I:531), however, gives three subdivisions: first, the *Katshikotin* of Eagle (once known as *Johnny's Village* after a chief) and probably also of *Charlie's Village* or *Tadush*, of which a few houses remain near the mouth of the *Kandik* river; second, the *Takon* of *Nuklako*, a village near the mouth of the Klondike; and third, the *Tsitoklinotin* at a village called *Fetutlin* near the *Fortymile* river, about halfway between the other two. This last group, making a third subdivision, is the one which does not correspond with my information. Two possibilities suggest themselves, either this group has disintegrated as a subdivision (I found no Indians at *Fortymile*) and have since been forgotten as such, or they originally counted as members of one of the other two bands or tribes.

*Upper Yukon Kutchin.*—This group (the *batʷen* of the Peel River Kutchin), according to my informants, comprised the people living in the territory of the Yukon and Lewes rivers above the country of the Han and below that of the Tagish, the intermediate Athapaskan-Tlingit tribe around White Horse. The Handbook (II:855) lists them as Tutchonekutchin, but they are known by a multitude of terms, most of which are vaguely applied. In common parlance of the Yukon river today, they are called "Stick Indians." Dawson (p. 202B) mentions two tribes or bands of them, the To-tshik-o-tin "about the mouth of Stewart River and . . . up the Stewart as far as the Beaver River, meeting there the Es-pa-to-ti-na to whom they are or were hostile," and the Kla-a-tsul-tshik(otin?) who "range from Rink Rapid and its vicinity on the Lewes to the head of the east branch of White River, where they go at the salmon-fishing season. These people probably also range down the river as far as the mouth of the Lewes, or further."

Although very little is known about the Upper Yukon people, it appears that they are related to the neighboring Nahani tribes to the east and south. Ethnographic work among them apparently will be difficult because of lack of informants, degeneration, and sickness.

*Lower Yukon Kutchin.*—The people on the Yukon river just below the True Kutchin are another problematical group who are at least partially extinct. My informants called them *te'tsci'*. Murray (p. 83) Tchuktchis (relating them to the Siberian Chukchees) and Richardson (I:398) Teytse or "people of the shelter." These are also, I believe, Dall's Tatsah (p. 30), which he said were wiped out by an epidemic of scarlet fever about 1863. The Handbook (II:698) lists them as Tatsa and locates them around the mouth of the Tanana and up the Yukon river. The same authority (II:712) suggests the Teahin (now extinct) were a subdivision of the Chandalar river tribe of True Kutchin, but I think they were more probably related to the Tatsa.

*Tenan-Kutchin.*—These are the Tanana river people and Dall (p. 29) gives Tenan-Kutchin as their own tribal name signifying "mountain men." Murray (p. 67) called them "Gens des Buttes." According to my informants they were definitely not True Kutchin, and Dawson (p. 203B), speaking of Dall's name, says Kutchin is a "gratuitous termination."

*Tchanin-Kutchin.*—Dall (p. 35) originally applied this term to the Tanaina of Cook Inlet, stating that it was the name by which the lower Tanana river people spoke of them. It represents the extreme extension of

the confusing application of Kutchin. Although this usage has been long discontinued, I mention it for completeness.

#### SUMMARY

The evidence indicates quite clearly that there are eight tribes which may be called the True Kutchin, forming a unity on the basis of their own opinion, of language, culture, and the use of Kutchin, "one who dwells," as a terminological ending. These I list below with the synonymy of the more important commentators, placing first in parenthesis what appears to be the best known or most desirable rendering of the native usage, generally that of the Handbook.

1. Yukon Flats Kutchin (Kutchakutchin)—Koocha-, Hardisty, Kootchin-, Murray; Kouscha-, Petitot; Kotch-â-, Whymper, Kutcha-, Handbook, Cadzow, Richardson; Kutchia-, Petitot, Kut'qa-, Morice.
2. Birch Creek Kutchin (Tennuthkutchin)—Birch Indians, Dall; Birch River Indians, Whymper; Gens de Bouleaux, Dall, Tennuth-, Dall.
3. Chandelar River Kutchin (Natsitkutchin)—Gens de Large, Petroff; Natche-, Cadzow, Dall, Natsik-, Hardisty, Natsit-, Handbook, Dall, Jones; Neyetse-, Murray, Richardson.
4. Black River Kutchin (Tranjikkutchin)—Tchandjoeri, Petitot, Tranjik, Cadzow, Hardisty. Not listed in the Handbook.
5. Crow River Kutchin (Vuntakutchin)—Vondt-way-, Jones; Vanta-, Murray; Vantah-, Hardisty, Voën-, Petitot, Vunta-, Dall, Vuntet-, Vuntit-, Cadzow; Zjen-, Petitot. (Vunta- in Handbook confused with Han.)
6. Upper Porcupine River Kutchin (Tukkuthkutchin)—Dakaz-, Morice; Dakkadhe-, Petitot; Deguthee-, Franklin, Mackenzie; Klovén-, Louches, Petitot; Rat Indians, Takkuth-, Hardisty, Takuth-, Kirby, Tukkuth-, Handbook, Dall, Tukudh-, Cadzow.
7. Peel River Kutchin (Tatlitkutchin)—Taitsick, Jones, Tatlit-, Handbook, Kirby; Tetlet, Cadzow; T'etlet-, Petitot.
8. Mackenzie Flats Kutchin (Nakotchokutchin)—Kwitcha-, Handbook, Petitot; Kwit'qa-, Morice; Nakotcho-, Handbook, Nâkotchgo-ondjig-, Petitot; Nekwichoujik, Cadzow. (Probably all synonymous, but may represent two tribes.)

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## THE CEREMONY OF THE SACRED BOW OF THE OGLALA DAKOTA

By HELEN H. BLISH

THE organization of the Sacred Bow<sup>1</sup> among the Dakota seems, so far, to have almost completely escaped the attention of ethnologists; Wissler's brief reference to the ceremony and some of its symbolism<sup>2</sup> being the only one I find in ethnological or historical publications. The organization was a very definite and complete one however, corresponding to the regular warrior societies in some respects and yet having apparently a much deeper ceremonial and spiritual significance.

There were organizations of this sort and name among at least two divisions of the Dakota, the Minneconjou and Oglala, but I shall concern myself here with the Oglala only. I use chiefly information secured from two old men, He Dog and Short Bull, both prominent in the old native society and still highly respected members of the tribe.

The Oglala society of the Sacred Bow was originated in response to a vision by Black Road. When but a young man Black Road was driven out into the wilderness by the chief medicine man of the band because he had smallpox. In his solitude he dreamed the Thunder beings instructing him as to the Sacred Bow. After his recovery he returned to his people and ceremonially organized the Sacred Bow society. He it was and he alone who appointed the carriers of the Bow.

It is evident from conversation with He Dog, the oldest living old-time leader of the Oglala, that this medicine man was regarded with almost superstitious respect. "He was a *real* magician," said He Dog, "a great medicine man." He truly possessed medicines that healed and protected. His snake medicine was especially potent; when he used it on snake bites they did not even swell, and people came to him from far and near for help. No one knew the source of his power or knowledge, however; that he kept absolutely secret. But, insists He Dog, he was the only Oglala medicine man to use snake symbolism. His personal charm was the long-tailed deer, apparently one source of his power, and in his rôle as medicine man he always carried a hoop. The Sacred Bow is the man's greatest single gift to his people: it incorporates the symbolism most characteristic of the originator.

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<sup>1</sup> Sometimes translated "Medicine Bow." Compare the name Medicine Bow, Wyoming, where the Southern Cheyenne are said to have held their first performance of the Sacred Bow.

<sup>2</sup> Some Protective Designs of the Dakota, AMNH-AP I, pt. 2: 50-52.

In its basic conception the Sacred Bow was doubtless borrowed from the Southern Cheyenne, who associate it with the Sacred Arrow prophet tradition. Both Oglala and Minneconjou informants state that the Sacred Bow tradition sprang from the Bow-String warrior society, founded among the Southern Cheyenne by the Great Arrow prophet before the advent of the white man.<sup>3</sup>

There seem to have been several elements common to this society and the Oglala Sacred Bow. The bows, for instance, were quite similar in appearance and not used as weapons. The men had to meet the same high test of strength and courage. Like the carriers of the Sacred Bow, the Bow-String warriors were painted red. No one might pass in front of them, and when others fled in battle, they fought to the death. Like the officers of the Sacred Bow, they were regarded with special esteem. They were the philosophers of the tribe.

But though the central idea was borrowed from another tribe, the Sacred Bow organization of the Oglala was truly their own. The organization as such, the elements, and traditions were essentially Oglala, the result of the personal vision of an individual Oglala.

The underlying motive of the Sacred Bow ceremony was preparation for war: it was essentially "war medicine." To be sure, it was sometimes "danced" in fulfillment of a vow made in case of emergency.<sup>4</sup> In time of great danger in battle someone might call on the Great Spirit and promise to perform the Sacred Bow ceremony if protection were granted. The suppliant might or might not be an appointed carrier of the bow. Always, however, it was "danced" primarily as war medicine, being used as wotowe, a charm, and performed as definite preparation for a specific warlike undertaking. Incidentally, the ceremony was performed only when some officer, having proved himself worthy in battle, wished to resign his post and when new members of the rank and file were being taken in. This motive, however, could be readily made to coincide with the occasion of the primary motive.

The officers of this organization usually numbered ten, the minimum being eight: always four bow-carriers and four hanger-carriers, two club bearers being usually added. The first four were in reality the leaders of the group. Appointment was governed by numerous and strict rules. Only men of unquestionable reputation for bravery, generosity, and general integrity could even aspire to such office. The four hanger-carriers ranked

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<sup>3</sup> G. A. Dorsey, *The Cheyenne*, FMNH-PAS IX, no. 1: 24-26

<sup>4</sup> Compare the Sun Dance and the Vigil of the Dakota



next, their qualifications being much the same, but not quite so rigorous. These eight were truly picked men. The two other officers correspond in a certain sense to sergeants-at-arms: they, too, were bound to meet the constant requirement of high courage and fortitude. In keeping with the general almost superstitiously reverent attitude toward the whole institution, all officers commanded the deepest respect of their fellow tribesmen.

There were strict requirements to be fulfilled by the eight leaders if they would retain their offices. The bow-carriers were not allowed to use any metals, even their drinking vessels being of wood. Their bodies were symbolically painted red both in peace and war. Most important, they had constantly to lead in battle, show extreme bravery, and strike at least one enemy with the bow in every encounter. If they carried their bows straight up in combat, they were not obliged to make a stand when hard-pressed; but under no circumstances might they retreat if they bore the emblems with spear-points pointed at the enemy.<sup>5</sup> The hanger-carriers were not under "metal taboo" or no-flight regulations. Their bodies were painted yellow instead of red; otherwise the requirements were similar. Obviously the lives of these eight men were distinctly strenuous. No one could endure the strain or the dangers long. So, while theoretically a man might hold office indefinitely (that is, until he were killed or voluntarily resigned by returning his instrument to the organization), in reality tenure of office was at most from two to four years.

After a man had proved himself unquestionably worthy in office, he might honorably return his emblem in token of resignation to the medicine man, who immediately chose a successor. The Sacred Bow was then "danced," at once as an initiation and resignation ceremony, and as a pledge of fidelity. Appropriately but incidentally, prayer was made during its performance for the recovery of someone suffering from serious illness or for power to fulfill vows manfully.

The ceremony itself was known as itazipa wakan yuha ki inyan kapi, "the Sacred Bow racing." The generic term *ki inyan kapi* is appropriately descriptive of the ritual, which was a veritable endurance race with the officers as runners. The sacred lodge of the society was placed at the center of a circular encampment, facing west. This was sacred ground; no one but the performers and the medicine man being allowed to enter during the ceremonial period. In front of it stood the sweat-house. The four cardinal points were marked by stakes set up at the circumference of the camp

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<sup>5</sup> Compare the no-flight regulations of *Miwatani* and other warrior societies (Wissler, *Societies and Ceremonial Associations in the Oglala Division of the Teton-Dakota*, AMNH-AP 11, pt. 1:4-48).

circle, each bearing the image of a man representing an enemy. The ceremony proper began as the runners in ceremonial regalia emerged from the sacred lodge. Facing the west in single file, the men raised their right hands and blew upon eagle bone whistles in appeal to the Great Spirit: first, the club-bearers, then the hanger-bearers, last the bow-carriers. Then the race began. No established order was essential once the ceremony had begun: each man ran his best and the first to arrive won. The men ran first straight to the west and circled the enemy stake, striking the "man" symbolically with bows, hangers, and clubs; then back to the lodge which they circled; then to the north and back to the lodge in similar manner; third to the east; and finally to the south. After circling the lodge for the fourth time, the runners left their regalia in proper ceremonial arrangement before the tipi (hangers erect and bows suspended from them), and then entered the sweat-lodge for their final purification. Then the ceremony was at an end. Considering the form of the ceremony and the size of the camp-circle—frequently a mile or more in circumference—one realizes that the ritual was a true test of endurance.

As the name of the whole institution indicates, the bow was its most prominent emblem. It was never used in the manner of a regular bow. There were four of these instruments, all about four and a half feet long and all alike except for minor variations and for a difference in the kind of wood: cherry, ash, willow, and oak. The bow was double-curved and unstrung. Rattlesnake skins wrapped the wood, and strips of sinew were strung along it, bound firmly at the center of the two curves and at the handle at the center of the bow. At the centers of the curves were also fastened bunches of eagle plumes and small bags of medicine. At one end of the bow was a long spear-point of flint. The most striking decoration, however, consisted in the feather banner which hung from one end. To a strip of buckskin of about an arm's length were fastened bunches of feathers of different kinds and colors: eagle plumes (not tail feathers) and covert feathers of various other birds. A rattlesnake skin was suspended from the banner near the bow; and from the lower tip of the banner hung two eagle tail feathers, attached to it by ribbons of bear gut, for when stretched and dried, bear gut has an iridescent surface and so was considered colorful and beautiful. The result was an unusual banner rather gorgeous in effect and a bow that was unique.

The bow was always carried with the banner end uppermost, else the banner would be dragged, but it might be carried at an angle or perpendicularly. In the ceremony or in battle, the bow was held in the left hand, gripped firmly by the handle, but at all other times it was carried in the

crook of the left arm and held by the right hand. At no time was it allowed to touch the ground, for it was sacred; and it was kept away from women. When out for ceremonial performances or for battle without being borne by its owner, it had to be laid upon sage or hung from its hanger. On other occasions it was kept in a strip of buffalo hide painted red, into which it must be placed ceremonially. Always before use it was passed through the smoke of burning sweet-grass to purify it.

The hangers (four in number to correspond to the bows) were sticks of cherry or ash about six feet long, forked at one end and pointed at the other, and unadorned except for a covering of red paint and a single eagle tail feather hung by a buckskin thong from the longer prong of the fork. When the bows were not in use the hangers were usually stuck upright in the ground and the bows hung from the forks.

The other emblems of office were the two wooden clubs decorated with small banners made of hawk tail-feathers. They also were hung from the bow hangers.

There were several other distinctive paraphernalia and paint markings. Probably the most noticeable was the head decoration: one of the most prominent forms of the founder's snake symbolism. A rawhide band cut in the shape of a snake, sometimes embroidered with porcupine quills, bound the head and unbraided hair of each dancer: through this, horizontally across the forehead, was thrust an eagle tail feather.

Another interesting emblem was the small medicine hoop (*cangleski*),<sup>6</sup> a miniature of one form of the Dakota sacred hoop. One was worn by each officer slung by a looped buckskin string from the left shoulder so that it hung at the right side. The hoop itself, about three inches in diameter, was cut from rawhide which was wrapped with a small buckskin thong. Buckskin also formed the web of the hoop, which consisted of four thongs painted blue. These radiated from a hooped center and divided the circumference into quadrants. The four points marked on the hoop by the cross-thongs corresponded to the four marks on the hoop of *ba inyankapi*, one of the most significant of the ancient games of the Dakota. Along one of the cross-thongs was fastened a tail of the long-tail deer, and at the center was a small bag of Black Road's medicine. Before every Sacred Bow "racing" and before going into battle each bow-carrier put a pinch of this medicine in his mouth. No one except Black Road knew just what it was, but every one knew that it was good medicine.

<sup>6</sup> Compare the hoop games, *ba inyankapi* and the sacred hoop used in the Ghost Dance (Wissler, *op. cit.*, 40-41). Recall also that one of Black Road's characteristic personal charms was a hoop.

Less noticeable were the wrist- and ankle-bands, made by matting together hair shed from the hump of the buffalo.

Each officer wore an eagle wing-bone whistle on a rawhide cord around his neck. Near the whistle also hung the image of a spider, cut from rawhide. This was supposed to carry a certain kind of deadly poison. Without doubt, however, this use of the spider symbol was prompted not only by the idea of the living spider as a carrier of poison, but even more by the significant association of the spider with the Thunder, that is, by the association of the spider with higher powers, powers that can protect and strengthen.<sup>7</sup>

The only other regalia common to all the "dancers" were the specially trimmed moccasins, each instep having a beaded or quilled sign of a black-tail or white-tail deer track. The unembroidered buckskin was painted red, and from the heel hung a deer tail.

Among the paraphernalia used only by bow-carriers was a tanned buffalo hide blanket about five feet square. Taken when the hair was short, i.e., just after the shedding, it was worn with the hair inside. Along each side of the robe, running from left to right (beginning at the top) a snake was painted. Just below the snake at the top of the blanket was painted a red-breasted swallow. The symbol of the dragon-fly occupied the center of the robe. From the top near the middle hung two strips of buffalo hide painted red, like streamers down the back.<sup>8</sup> The robe was the official garment of the bow-carrier, being worn whenever he was carrying the bow except during the "race" itself.<sup>9</sup>

The officers' horses also had special equipment in battle and on festal occasions. The rope used on a carrier's horse had to be woven by an old

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<sup>7</sup> Compare Clark Wissler, *Some Protective Designs of the Dakota*, AMNH-AP I, pt. 2: 48-49. Wissler says that the spider was closely associated with the Sacred Bow and that its symbol was found on several of the pieces of regalia (pp. 50-51), but my informants mention this one only. The whistle itself symbolized the great Thunder power and its note the cry of the eagle which was a representative of the Thunder (pp. 46-48). Thus the warrior bore in this single instrument symbols of a medium of direct physical injury to the enemy and of a medium of appeal to higher spirits for power against others and for protection for himself.

<sup>8</sup> Two types of robe were described to me, both differing in considerable detail from that described by Wissler (*op. cit.*, 51). In one case the tanned side was painted entirely red. The only additional bit of decoration was a strip of buffalo hide from two to three inches wide and about a yard long, cut from the side of the robe and fastened near the top at the middle so that it hung down the back from about shoulder height. Blanket, moccasins, and leggings were all red. This, I believe, was the more common form of robe. The other was more complex in detail and symbolism.

<sup>9</sup> The bow was never entrusted to the care of anyone else.

woman from three strands of buffalo hair. When finished it was about sixteen or twenty feet long and as large around as a woman's thumb.

In addition to all these regalia there was for men and horses definite ceremonial face- and body-painting aside from the solid red and yellow already mentioned. The face-painting of the men consisted of a black or blue band drawn in a curve from temple to temple across the bridge of the nose. This was forked on each temple and represented lightning. A crescent was drawn on the breast. The joints (wrist, ankle, elbow, and knee) of each "dancer" were ringed with blue (a blue from a rock secured near Lusk, Wyoming). The mark was known as "the blue rock mark" and symbolized the Winged God.<sup>10</sup>

The markings of the horses were almost equally elaborate. White horses were painted red, dark horses white. Lightning symbols extended down the legs from withers and hips and were forked at the hoofs. A so-called "death line," also representing lightning and therefore deadly swiftness, was painted across the shoulders in front of the rider and across the hips and flanks back of the rider. Two images of birds—the red-breasted swallow (note that the same bird appeared on the carrier's blanket of the second type)—appeared inside the line in front of the rider. Two dragon-fly symbols were drawn inside the line back of the rider. Dots or round spots, emblems of hail and storm, were painted on shoulders, hips, and flanks outside the "death lines."

An outstanding fact about the decorations is that the symbols were almost entirely those of storm or death-dealing agents: lightning, wind, hail, the spider, snake, bear: forces that show no mercy. All others represented living creatures that possessed qualities greatly desired by the warrior. The eagle, hawk, swallow, dragon-fly, all possess great speed in flight and ability to strike swiftly and surely; and they seem to bear a sort of charmed life before bullets, arrows, hail, and lightning, for one does not find them killed or injured by these forces.<sup>11</sup>

But behind all this rather obvious and physical representation, there is a more deep-lying and significant spiritual symbolism. According to the

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<sup>10</sup> Wissler describes all this and a variant face marking (*loc. cit.*) but he does not mention the painting on the breast. The differences may be explained by the fact that these marks are dictated more or less by the individual "dancer."

Wissler describes also two manners of arm- and leg-painting in both of which the forked lightning symbol is the prominent feature, running down the arms and legs (*op. cit.*, 51-52). My informants did not mention these. But again the seeming discrepancy may be explained by the differences in individual dreams.

<sup>11</sup> Cf. also Wissler, *op. cit.* 36-37.

story of origin, the instructions for the Sacred Bow society came from the Thunder beings. Consistently, most of the forces or creatures symbolized bore, according to Lakota belief, some direct or indirect relation to the thunder. Lightning, wind, hail—all storm elements—were definitely and directly associated with the Thunder beings, of course. The eagle, the well-known Thunder Bird, symbolized in this institution by wing-bone whistle, tail feathers, and plumes, was one of the chief representatives of these sky forces. The buffalo, represented by the robe, the rope, the wrappings for the bow, etc., and its association with the Thunder need no explanation. The swallow was a significant comparison to the Winged God whose voice was thunder and the flash of whose eyes was lightning.<sup>12</sup> The spider's association with Thunder I have already described. Throughout, there is evidence of a feeling of close affiliation between the "dancers" of the Sacred Bow and these spirits of high prominence in Lakota religion and philosophy, the Thunder beings.

The prominence of the long-tail deer and snake is chiefly due to their being among Black Road's personal charms, having come to him in dreams. The snake in Lakota lore primarily represented bad luck: bad luck in this case to the enemy. The fork-horned animals were considered particularly potent carriers of magic, prominently the long-tail deer. Doubtless, however, there was special secret significance attaching to them for Black Road which he never explained to anyone.

Every mark and every bit of regalia carried a charm of some sort against evil. Further, it announced to the enemy that he had more than a mere human foe to meet. But more than this, whether the significance of the figure used was primarily physical or spiritual, in all cases the symbol voiced a prayer for protection or for power against opposing forces or for both.

In its general outlines, the institution of the Sacred Bow was typical of Lakota organizations and conceptions. Beyond this it reflected significantly the attitude toward war as a part of everyday existence. There seems, however, to have been something unique in the esteem in which the organization was held. As one speaks with various Indians about it, one is impressed with the awe and reverential respect it inspired, sentiments extended to the material instruments and the officers.

DETROIT,  
MICHIGAN

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<sup>12</sup> Cf. J. R. Walker, *The Sun Dance and Other Ceremonies of the Teton Dakota*, AMNH-AP XVI, pt. 2:173.

## THE MAYA KINSHIP SYSTEM AND CROSS-COUSIN MARRIAGE

By FRED EGGAN

### INTRODUCTION<sup>1</sup>

ALTHOUGH considerable is known about certain aspects of the culture of the ancient Maya, information now available concerning their social organization is extremely unsatisfactory. In regard to kinship only a few partial lists of terms have been presented and these have hardly sufficed to give any clear picture of the nature of their kinship system. The available information concerning social structure, descent, marriage, etc., is even less satisfactory. Landa<sup>2</sup> has only a few paragraphs relative to these subjects, while Tozzer<sup>3</sup> indicates some possible survivals among the Lacandones.

With the recent publication of the Motul dictionary,<sup>4</sup> however, a considerable amount of new material has been made available to the ethnologist, including a much more complete set of kinship terms and applications which throws new light on the nature of the kinship system and the probable type of marriage which prevailed among the ancient Maya.

The importance of the kinship system in relation to the social organization and marriage practices has been underestimated by the majority of American ethnologists. This relationship has been emphasized recently by Lowie:

Relationship terms are studied by the Anthropologist not merely as so many words inviting philological analysis and comparison, but as correlates of social custom. Broadly speaking, the use of a specific kinship designation, e.g., for the maternal as distinguished from the paternal uncle, indicates that the former receives differential treatment at the hands of his nephews and nieces. Further if a term of this sort embraces a number of individuals, the probability is that the speaker is linked to all of them by the same set of mutual duties and claims, though their intensity may vary with the closeness of the relationship. Sometimes the very essence of social fabric may be demonstrably connected with the mode of classifying kin. Thus kinship nomenclature becomes one of the most important topics of social organization.<sup>5</sup>

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<sup>1</sup> This study was initiated by Dr Robert Redfield and greatly aided by Mr J. Eric Thompson who gathered the kinship terms as part of a page-by-page study of the Motul dictionary. Prof A. R. Radcliffe-Brown made valuable suggestions and criticisms, and Dr Manuel J. Andrade cleared up several linguistic difficulties. The writer is greatly indebted to these men.

<sup>2</sup> Diego de Landa, *Relacion de las Cosas de Yucatan* (Paris), 1864.

<sup>3</sup> A. M. Tozzer, *A Comparative Study of the Mayas and Lacandones* (New York), 1907.

<sup>4</sup> *Diccionario de Motul, Maya Español*, atribuido a Fray Antonio de Ciudad Real . . . edición hecha por Juan Martínez Hernández (Merida, Yucatan), 1929.

<sup>5</sup> R. H. Lowie, *Relationship Terms*, *Encyclopaedia Britannica* (14th ed.), 1929.

It is of course highly desirable that this relationship be actually observed, for as Professor Radcliffe-Brown has pointed out,

... the way in which relatives are classified for social purposes, although this is correlated with the terminology, cannot be inferred with any certainty, and in any detail, from the terminology.<sup>6</sup>

Actual observance of the ancient Maya kinship system being no longer possible, it seems desirable to analyze the existing material in an attempt to arrive at some tentative conclusions which may be of value, both in the interpretation of Mayan social organization and in the further study of other Central American groups.

In this connection it is perhaps pertinent to recall that Rivers<sup>7</sup> long ago pointed out the possibility of cross-cousin marriage among certain of the Cree groups on the basis of the kinship terminology, that Hallowell<sup>8</sup> independently came to similar conclusions, and that, later, Strong<sup>9</sup> actually found cross-cousin marriage among the northern band of Naskapi.

Analysis of the Mayan kinship terms, in regard to their various applications, strongly indicates a marriage system of the bilateral cross-cousin type. In view of the reported rarity of this type of marriage in North America, along with its occurrence in northern South America and brief references to its occurrence in Central America, any new evidence is important. This evidence will also have significance in regard to recent views advanced by Ralph Beals<sup>10</sup> concerning the nature of Mexican social organization.

The following list of Maya terms and applications is taken from the Motul<sup>11</sup> and Beltrán<sup>12</sup> dictionaries. These two sources agree quite well, al-

<sup>6</sup> A. R. Radcliffe-Brown, *The Social Organization of Australian Tribes*. Oceania Monographs, no. 1. 12-13 (note), 1931.

<sup>7</sup> W. H. R. Rivers, *Kinship and Social Organization* (London), 1914.

<sup>8</sup> A. I. Hallowell, *Was Cross-Cousin Marriage Formerly Practiced by the North Central Algonkian?*, ICA 23 (New York), 1928.

<sup>9</sup> W. D. Strong, *Cross-Cousin Marriage and the Culture of the Northeast Algonkian*, AA 31:277-88, 1929.

<sup>10</sup> Ralph Beals, *Unilateral Organizations in Mexico*, AA 34:467-75, 1932.

<sup>11</sup> *Diccionario de Motul* *op. cit.*

<sup>12</sup> Pedro Beltrán, *Arte del Idioma Maya* (2nd ed., Mérida), 1857.

The date of the composition of the Motul dictionary is uncertain. Juan Martínez Hernández, the editor of the edition used, says (p. xvii) "it was written in the last quarter of the sixteenth century because the author, under the word 'budz-ek' mentions a tailed comet which he observed in the year 1577." Beltrán says in the grammar which bears his name, and from which Pío Perez extracted and published the vocabulary used, that he dictated his work in 1742. It was first printed in 1746.

A summary of the Beltrán terms is given by P. Radin in AA 27:100-102, 1925. A more



though the former gives a much more complete set of terms. Terms given by Beltrán alone are marked with a B. The varied nature of the applications makes it difficult to arrange the terms systematically. The arrangement selected is based primarily on generation; where terms are repeated they are marked with an asterisk and the complete applications given the first time only. Several terms, particularly those for affinal relatives, are compounded by the use of a descriptive word.

#### MAYA KINSHIP TERMS AND THEIR APPLICATIONS

##### *Ego's Generation*

- zucun (reciprocal idzin) older brother, man's father's father; man's second cousin (if older)
- cic (reciprocal. idzin), older sister; man's mother's brother's daughter (if older); man's son's wife's mother.
- idzin (reciprocals zucun, cic), younger brother; younger sister; man's son's son; man's son's daughter.
- mam (reciprocal: mam), man's mother's sister's son; man's father's brother's son; man's mother's father; man's daughter's son.
- ca zucun,<sup>13</sup> older male cousin ("second elder brother") (B); wife's older sister's husband; greatgrandfather
- ca cic, older female cousin (B); woman's mother's mother.
- ca idzin, younger male or female cousin (B); man's son's son; greatgrandchild.
- zucun cabal, husband's older sister's husband, woman's daughter's husband's father; woman's son's wife's mother
- cic bal, wife's brother's wife (if brother is older).
- chich, wife's brother's wife; man's mother's mother; man's daughter's son's wife.
- idzin cabal, wife's younger sister's husband; wife's younger brother's wife; man's daughter's daughter's husband; husband's younger brother's wife; husband's younger sister's husband.
- hachil, wife's brother; man's sister's husband; father-in-law (non-voc.).
- hauan, husband's sister; woman's brother's wife; woman's son's wife's mother; woman's daughter's husband's mother; husband's mother; wife's mother.
- muu, wife's sister, man's brother's wife; husband's brother; woman's sister's husband.
- baal, wife's brother; man's granddaughter's husband; wife's grandfather.
- bal, man's son's wife's father; man's daughter's husband's father; wife's father's father.

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complete list from Beltrán is given by M. H. Watkins, *Terms of Relationship in Aboriginal Mexico* (Master's thesis, University of Chicago, 1930).

<sup>13</sup> Second cousins are designated by prefixing the word ox, "third," and third cousins by prefixing can (Beltrán) Beltrán and the Motul vary somewhat in the applications of these terms.

icham, husband

atan, wife.

*Parents' Generation*

yum<sup>14</sup> (reciprocal: mehen), father.

mahan yum,<sup>15</sup> step-father.

dze yum (reciprocal: mehen), father's brother, step-father's brother, mother's sister's husband.

na (reciprocal: al), mother

mahan na, man's step-mother.

dze na<sup>16</sup> (reciprocal: al), man's mother's sister; man's father's brother's wife

acan (reciprocal: achak), man's mother's brother; man's step-mother's brother; man's father's sister's husband; man's mother's grandfather

han, man's mother's brother; wife's mother's brother; man's daughter's husband, wife's brother's son; wife's father; man's mother's sister's husband; woman's daughter's husband.

ix cit (reciprocal: mehen), man's father's sister; man's step-father's sister; man's mother's brother's wife.<sup>17</sup>

noh yum,<sup>18</sup> husband's father; woman's father's sister's husband.

ix han, wife's mother (B).

\*hauan, wife's mother, woman's husband's mother.

\*hachil, father-in-law (non-voc.).

*Grandparental Generations*

\*zucun (reciprocal: idzin), man's father's father.

\*ca zucun (reciprocal: ca idzin), man's greatgrandfather (father's father's father ?).

\*mam (reciprocal: mam), man's mother's father.

ca mam, mother's grandfather; daughter's son's son.

mim (reciprocal: camehen; i), father's mother; mother's grandmother.

\*chich,<sup>19</sup> man's mother's mother.

ca cic,<sup>19</sup> woman's mother's mother.

ca icham, woman's grandfather; woman's granddaughter's husband.

ca atan, woman's mother's mother, man's grandson's wife.

ca yum, woman's father's grandfather.

<sup>14</sup> There were also non-vocative terms yumbil, "father," hach yum, "legitimate father," etc., the latter probably due to Spanish influence. There were similar non-vocative terms for other relatives.

<sup>15</sup> The terms for parents are extended by means of descriptive qualifiers: mahan, "married," and dze, "little."

<sup>16</sup> The terms for parents, uncles, aunts, and siblings are the same, in general, for both male and female egos.

<sup>17</sup> The Motul gives "father's brother's wife." This seems to be an error in view of the applications of acan and dze na.

<sup>18</sup> Noh means "big."

<sup>19</sup> It is probable that chich and cic are related or similar terms.

\*acan, man's mother's grandfather

\*baal,<sup>20</sup> wife's grandfather.

\*bal,<sup>20</sup> wife's father's father

*Children's Generation*

mehen,<sup>21</sup> man's son, man's brother's son; woman's brother's son; woman's sister's children, woman's sister-in-law's children.

ix mehen,<sup>22</sup> man's daughter.

al, woman's child; woman's sister's child.

xiblal,<sup>23</sup> woman's son.

achak (reciprocal, han, acan), man's sister's son; man's wife's brother's son.

ilib, wife's brother's daughter; man's son's wife.

ilbal, woman's son's wife.

\*han, man's daughter's husband, wife's brother's son; woman's daughter's husband.

*Grandchildren's Generations*

ca mehen, man's grandson.

\*idzin, man's son's children.

\*ca idzin, greatgrandchild; man's son's son.

\*mam, man's daughter's son.

i, woman's son's children.

abil, woman's daughter's children.

\*idzin cabal, man's daughter's daughter's husband.

\*ca icham, woman's granddaughter's husband.

\*baal, man's granddaughter's husband.

\*ca atan, man's grandson's wife.

\*chich, man's grandson's wife

ox mehen, man's greatgrandson.

\*ca mam, man's daughter's son's son.

ca al, woman's daughter's daughter's children.

The applications of these terms are considered in the following pages. An analysis of these applications, besides throwing some light on the type of marriage practiced by the ancient Maya, also gives some basis for tentatively completing the kinship structure.

The Maya kinship system is of the "classificatory" type in that the father is classed with the father's brother and the mother with the mother's sister. The tendency to generation stratification is rather strongly marked, but is complicated by a tendency to link alternate generations through the

<sup>20</sup> It is probable that bal and baal are similar terms.

<sup>21</sup> Mehen also means "semen" at present.

<sup>22</sup> Ix probably means "woman" or "female." It is so used in related languages.

<sup>23</sup> Xib refers to "male" or "man." Al refers to "being heavy with child" also.

use of the same or similar terminology. Sexual differentiation is stressed; practically all the important terms in ego's generation and above (except *idzin*) indicate the sex of the relative, while in the descending generations the sex of the speaker is indicated. In many cases the sex of the connecting relative is also stressed. Seniority is emphasized in ego's generation only, but is extended to a group of special relatives by marriage. The large number of terms in the Maya system is partly brought about by the fineness of the distinctions made among various affinal relatives. It may be noted that certain affinal relatives are designated by compounding sibling terms while others have independent terms.

The extensions of the kinship system are not clear, but relatives seemed to have been recognized to the third or fourth cousin at least. There is evidence in the literature to indicate a further extension to relatives in the father's line by means of the naming system, while certain relatives of the mother were not considered as "related," for marriage purposes at least (see below).

The Mayan terms, as given by Beltrán, have been analyzed and compared with other terminologies for aboriginal Mexico from Kroeber's<sup>24</sup> "psychological" point of view by M. H. Watkins.<sup>25</sup> He found that the "Maya system consists of more primary terms than any other" in the region concerned, and that in regard to the expression of Kroeber's principles there was much general uniformity throughout the area.

A preliminary study of the Maya kinship terminology by the writer suggested the possibility of a cross-cousin marriage system. The following analysis of the terminology is designed to marshal the evidence in favor of this possibility. Much of the apparently random nature of the kinship applications disappears when such a marriage is assumed. This check of internal consistency, while indirect, is nevertheless very important. The information available in the literature for both the ancient Maya and for modern Central American groups will be noted.

In the grandparents' generations there are four terms used by a male ego, while a female ego classifies the mother's father with the father's father. The terms used, *zucun*, *mam*, *chich* or *cic*, *ca icham*, and *ca atan*, also serve to link alternate generations. Greatgrandparents are designated by the qualifying word *ca* ("second"), or by the use of other terms such as *acan* ("mother's brother") or *mim*.

In the parents' generation the classifying of parents with their siblings of the same sex has been noted. The classification of the father's brother

<sup>24</sup> A. L. Kroeber, *The Classificatory System of Relationship*, JRAI 39.77-84, 1909

<sup>25</sup> M. H. Watkins, *op cit*, 41 ff.

with the mother's sister's husband, and the mother's sister with the father's brother's wife is consonant with both cross-cousin marriage and the sororate and levirate. Since this classification of relatives may be found in tribes having none of these institutions, it is possible that other more basic factors are involved.<sup>26</sup>

Two terms are given for the mother's brother, *acan* and *han*, the former perhaps being primary.<sup>27</sup> Under a system of cross-cousin marriage the mother's brother (*acan*) would normally be the father's sister's husband (*ix cit*). The father's sister would likewise be the mother's brother's wife (*ix cit*). A man's mother's brother (*han*) would also be his wife's father, and under certain circumstances (such as a pair of brothers marrying two sisters who stand in the relation of cross-cousin) the mother's sister's husband would be the wife's mother's brother. The extension of *acan* to the mother's grandfather represents a linking of alternate generations.

The terms for parents-in-law would also fit a cross-cousin marriage system. *Noh yum*, "great father," classes together a woman's husband's father and her father's sister's husband. The term *ix han*, "wife's mother," is interesting in view of the applications of the term *han* to a man's wife's father and to the mother's brother, and suggests the possibility of a mother's brother providing his daughter as a wife for his sister's son.

The limited application of the mother's brother-sister's son terms suggests a special relationship between these two relatives. The use of *mehen* ("child") as a reciprocal term to *ix cit* ("father's sister") suggests that the latter was perhaps considered as a "female parent." The alternate classification of her husband as a "great father" is additional evidence.

In ego's generation the terms for siblings are the same for both a male and female ego. The older brother and older sister are distinguished while the younger brother and sister are classed together. This emphasis on seniority is observed in the extensions of the sibling terms to alternate generations and to affinal relatives.

The deficiencies of the Motul in regard to terms for parallel and cross-cousins is surprising in view of the presence of so many affinal terms. Only *mam*, "male parallel cousin," and *cic*, "man's mother's brother's daughter" (if older), are specifically given by the Motul. Watkins' study of Beltrán indicates that sibling terms were used for cousins.

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<sup>26</sup> Professor Radcliffe-Brown (*op. cit.*, 96-99), has proposed the principle of the "equivalence of brothers" as the general principle underlying both the "classificatory" system of terminology and the sororate and levirate.

<sup>27</sup> It is possible that the term, *han*, is used after marriage has taken place since most of its applications are to relatives by marriage.

A cousin is designated by adding a prefix, according to the degree of remoteness, to the corresponding sibling: e.g.,

caa zucun, older male cousin (second older brother)

caa cic, older female cousin (second older sister)

caa idzin, younger cousin (second younger sibling)

ox zucun, older male second cousin (third older brother)

can zucun, older male third cousin (fourth older brother).

A man's father's brother's son is also called mam and this sort of cousinship is called mam bil.<sup>28</sup>

The use of sibling terms for cousins is indicated for neighboring groups by Fuentes y Guzman.<sup>29</sup> The significance of the additional differentiation for male parallel cousins is not clear since practically nothing is known of the kinship behavior of the ancient Maya. Under a system of cross-cousin marriage it would be desirable to be able to distinguish parallel from cross-cousins.

The extension of the sibling terms to certain of the siblings-in-law is of considerable significance from the standpoint of the marriage system. If relatives by marriage are to be differentiated in a cross-cousin marriage system, one solution is the extension of the pre-marital terms for such relatives.

An analysis of the sibling terms and their extensions yields considerable insight into the nature of the kinship structure and the marriage system. The term zucun serves to link the father's father and the elder brother. Used for cousins (ca zucun, etc.) it serves to differentiate degrees of relationship in regard to "brothers." In regard to affinal relatives a wife's elder sister's husband (ca zucun) would be an older brother under a system of cross-cousin marriage where an eldest son married his eldest cross-cousin, etc. Zucun cabal fits a cross-cousin marriage system in that a woman's son's wife's father, her daughter's husband's father, and her husband's elder sister's husband may all be the same person.

The term cic likewise serves to link the mother's mother and the elder sister. Under a cross-cousin marriage system a man's elder sister may, in certain cases, also be his son's wife's mother; in other cases his mother's brother's daughter may be his son's mother-in-law. A man's wife's brother's wife (cic bal) would also be a sister under cross-cousin marriage where exchange was involved. The term chich, which seems to be closely related to cic, is subject to the same analysis.

<sup>28</sup> M. H. Watkins, *op. cit.*, 44. There is some difference between the Motul and Beltrán in the use of the qualifiers ox, ca, etc.

<sup>29</sup> See quotation below.

The term *idzin* shows applications and extensions to younger relatives which parallel those for *zucun* and *cic*. Under a cross-cousin marriage system a man's wife's younger sister's husband (*idzin cabal*) might be his younger brother, his wife's younger brother's wife would be his younger sister, and his daughter's husband might very well be his son's son (*idzin*). Further, a woman's husband's younger sister's husband (*idzin cabal*) would be her younger brother, and her husband's younger brother's wife would be a younger sister.

It seems evident from the above analysis that the distinctions made on the basis of relative age among the affinal relatives are consonant with similar distinctions made among the siblings involved. It may be noted that sibling terms are involved only in one particular type of relatives-in-law. This evidence points to a marriage system in which the eldest child marries the eldest cross-cousin, etc. Since the terminology for the new relatives is based on the sibling terms, it is probable that Beltrán's analysis of the "cousin" terminology is substantially correct.

The use of the term *mam* as an alternate designation of male parallel cousins may have served to differentiate parallel from cross-cousins where necessary. The term, which is self-reciprocal, also serves to link the mother's father with these parallel cousins.

The other terms for siblings-in-law are all of the pattern "spouse's sibling." Under cross-cousin marriage a man's wife's brother (*hachil*) would be his sister's husband. The terms *hauan*, *muu*, and *bal* may be similarly analyzed. These siblings-in-law, under a system of cross-cousin marriage, would be cross-cousins before marriage. If the assumption of such a marriage is correct, it is evident that the Maya have chosen to extend the sibling terms, as outlined above, and to modify the previous cross-cousin terminology ("second siblings") by using new terms, *hauan*, *muu*, *baal*, and *bal*. This procedure retains the socially closer relationships (siblings) and avoids too great confusion among the affinal relatives. The failure of the Motul dictionary to give a complete set of "cousin" terms, while furnishing a detailed list of affinal relatives, is partially intelligible from the above analysis.

Separate terms are used for the husband and wife. These are extended to the grandparents' and grandchildren's generations by means of the qualifying word *ca*, "second." Here, again, alternate generations are linked by means of the terminology since separate terms are used for the children's spouses.

In the children's generation separate terms are used by men and women for their children. A man classes his brother's children with his own but

has a special term for his sister's son. A woman classes her sister's children with her own, but also uses the term *mehen* for her sister's and brother's children.

The terms for son-in-law and daughter-in-law reflect a cross-cousin marriage system. The term *han* refers to a man's daughter's husband and his wife's brother's son. A man's son's wife (*ilib*) would normally be his wife's brother's daughter.

The terms for children's parents-in-law, *bal*, *zucun cabal*, and *hauan* likewise may be analyzed from the standpoint of cross-cousin marriage. The term *bal* equates a man's son's wife's father and his daughter's husband's father. If the term *baal* is considered as an equivalent term, the man's wife's brother would also be the son's wife's father. *Zucun cabal* has been analyzed in another connection, while *hauan* may be similarly analyzed.

In the grandchildren's generations separate terms are used by men and women. A man may call his grandchildren *ca mehen*, "second children," or alternately, class them with his younger brother (*idzin*), or use the reciprocal term *mam*. Greatgrandchildren are either *ox mehen* ("third children") or *ca mam*. A woman uses a separate set of terms for grandchildren.

The terms for grandchildren-in-law reflect the tendency to link alternate generations by means of the terminology, rather than having any reference to cross-cousin marriage. Under such a system of marriage the relatives listed under *baal* would have similar positions, conceptually, in the resulting kinship structure.

#### CONCLUSIONS

In the foregoing pages the kinship terminology of the ancient Maya has been analyzed from the hypothesis of a system of cross-cousin marriage. It is now desirable to see what alternative hypotheses there are that might account for the same phenomena, and what evidence exists in the literature for one or the other of these hypotheses. The validity of the above analysis must rest on evidence found in the literature, information from surviving Maya groups, and on the internal consistency that is achieved within the kinship system.

If the kinship terminology may be considered as classifying relatives for social purposes, the possible purposes which might be correlated with a terminology of the Maya type are as follows:<sup>30</sup>

1. Cross-cousin marriage;

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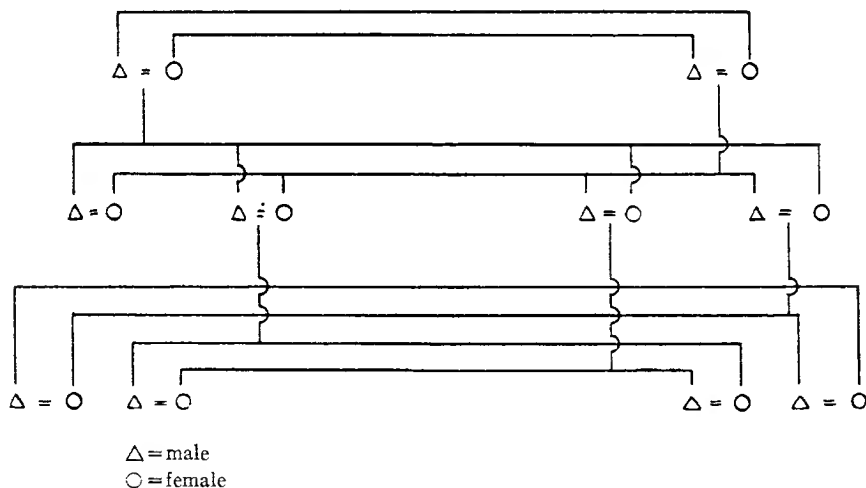
<sup>30</sup> Cf. R. H. Lowie, *Relationship Terms*, *Encyclopaedia Britannica* (14th ed.).



2. Exogamous moieties (or clans),
3. Daughter exchange by households.

These three possibilities are not mutually exclusive or incompatible with one another, in fact the three are often found together. Hence it is difficult to select any one of them on the basis of the terminology alone, since any series of terms which fits a cross-cousin marriage system will also fit a "moiety" organization. A system of exogamous clans or moieties with reciprocal daughter exchange by households is theoretically possible in regard to the ancient Maya. However, the number of terms for affinal relatives, the extension of sibling terms to certain of these relatives, and the fineness of the distinctions made, argue for a system of bilateral cross-cousin marriage. Terms for certain relatives do not seem to fit a "moiety" division in that these relatives may be in different divisions; the following

#### PROPOSED MAYA KINSHIP STRUCTURE



terms may be cited: *mam*, *cic*, *zucun*, *mehen*, *han*, *hauan*, etc. The fact that apparently random and meaningless applications and extensions of terms become intelligible when cross-cousin marriage is assumed is perhaps the best evidence available from the terminology alone.

The basic kinship structure resulting from such a marriage system would be as follows:

If the applications of the various kinship terms given above are analyzed in connection with this chart, the apparently random and complex usages will be found to be organized into a simple and coherent system; one

which holds together the resulting structure and at the same time differentiates the units where necessary.

With a bilateral system of cross-cousin marriage related households will tend to exchange daughters. The new relationships set up by such marriages may be ignored or recognized. The Maya seem to have differentiated the new relatives by extending the sibling terms to them, at the same time modifying the terms to indicate the nature of the relationship.

Under such a system a man normally looks to his mother's brother and his father's sister ("mother's brother's wife") to supply him with a wife. It is probable that this social function may be related to the restricted mother's brother-sister's son terminology, and it is consonant with the view advanced concerning the position of the father's sister and mother's brother as "parents."

From the standpoint of holding together the social structure as outlined, the linking of alternate generations through the terminology is an important integrative factor. Within the same generation a similar integrative function is performed by the extensions of sibling terms.

The question of an unilateral social organization among the Maya has been recently raised by Ralph Beals<sup>31</sup> on the basis of information given by Landa.<sup>32</sup> Since this information has considerable bearing on the present discussion it is presented as translated by Beals:

They were careful to know the origin of their lineages, especially if they come from some house of Mayapan. The names of the fathers remain always with the sons and not with the daughters. They always call their sons and daughters by the name of the father and mother. In this way the son of Chel and Chan is called Na-Chan-Chel, which is to say, the son of such ones, and this is the cause that those of one name are said to be relatives and are treated as such and for this, when one arrives in some place where he is unknown and is in need, he immediately makes known his name and if there is any one of this name he is immediately received and treated with all kindness and thus no man or woman marries with one of the same name because it is for them a great disgrace. The Indians do not permit the daughter to inherit with the sons except by charity . . . the sons divide equally, except to him who most notably has helped gather the estate is given an equivalent return, and if all are daughters, the brothers inherit. . . . If one married one's brother's wives it was considered bad. They do not marry with step-mothers, nor their wives' sisters, nor their mother's sisters, and if someone did so it was considered bad; with all other relatives on the mother's side they could marry, even though they were first cousins.<sup>33</sup>

<sup>31</sup> Ralph Beals, *Unilateral Organizations in Mexico*, AA 34, 1932.

<sup>32</sup> Diego de Landa, *Relacion de las Cosas de Yucatan* (Paris), 1864, pp. 134-40.

<sup>33</sup> Ralph Beals, *op cit.*, 471-72.

According to Beals this "only makes sense if we assume a sib system."<sup>34</sup> While the evidence is suggestive of an unilateral organization it is not conclusive.

It is evident that in Landa's time marriage was permitted with the mother's brother's daughter and other relatives on the mother's side. Whether marriage with the mother's sister's children was barred is not clear. While both the sororate and levirate were condemned according to Landa, it is uncertain whether this referred also to marriage with the widow or widower of a deceased sibling.

Landa's information seems to indicate patrilineal, named groups which had duties in regard to marriage, inheritance, and assistance, and which were not localized. While it is not necessary for a cross-cousin marriage system to be correlated with an unilateral organization, the association is frequently found. An analysis of the terms for affinal relatives in regard to a possible "moiety" organization indicates that, except for two terms (*han* and *hauan*), they fall consistently into one division or the other. Regardless of whether or not unilateral institutions are shown to be present among the ancient Maya, the social structure based on cross-cousin marriage seems to be the primary structure.

Further information, referring probably to the Quichés or Cakchiquels, is given by Fuentes y Guzman:

La mujer que enviudaba, si quedaba moza no había de quedar libre, y suelta de aquel yugo que se contraía por el género de sus matrimonios, porque el marido la casaba de su mano con hermano o pariente cercano de él, y los hijos de estos casaban con los parientes de la madre, juzgando que, porque ella salió de la casa de sus padres, ya no era parienta de aquel calpul, y hasta hoy en sus propios parentescos, no saben hacer distinciones, y generalmente todos los del calpul se llaman hermanos, sin explicar otro grado.<sup>35</sup>

While the significance of this paragraph is not entirely clear, several points are of interest in connection with this paper. After marriage a woman apparently broke the kinship ties which held her in her own calpul and contracted new ties with the members of her husband's calpul. These latter ties were continued after the death of her husband by means of marrying his brother or other near relative. Further, sons of the mother by these men could marry back into the mother's household, or relatives, since she was

<sup>34</sup> *Ibid.*, 472

<sup>35</sup> Fuentes y Guzman, *Historia de Guatemala* (1695) I. chap. IV:32 (Madrid), 1882. (Reference furnished by J. Eric Thompson.)

no longer considered as being "related" to them.<sup>36</sup> Within the calpul all were called "siblings" without any other distinction (presumably within the same generation). While the structure of the calpul in this region is not known, it was evidently based upon kinship ties and maintained by marriage back into the mother's calpul, by a modified form of the levirate, and by patrilocal residence. Whether this marriage took place between parallel cousins as well as cross-cousins is not clear.

There is undoubtedly further material in the literature concerning the nearby and related tribes of which the writer is not aware. Breton<sup>37</sup> gives a list of kinship terms for various tribes gathered from the literature but these are too fragmentary for comparative purposes in regard to the problems dealt with in this paper.

Supporting evidence for cross-cousin marriage is to be found in some of the recent ethnographic field work in the region. Conzemius has the following statement concerning marriage restrictions among the Miskito and Sumu Indians of Honduras and Nicaragua:

The children of two brothers or of two sisters are considered real brothers and sisters and they are not allowed to marry each other. . . . Upon the death of his wife a man generally married her sister; similarly if a woman has lost her husband she was taken in marriage by her brother-in-law. . . . On the other hand the children of a brother and sister [cross-cousins] are not considered blood relatives, and a union between such cousins is the common and originally perhaps the only marriage allowed. Unions of this kind are still encouraged today, for it is felt that family ties are strengthened thereby. . . . The children are sometimes engaged by their respective parents while still in early infancy . . . when she arrives at puberty he takes her as his wife. The man is considered a member of his wife's family and he goes to live in the house of his parents-in-law. When the family enlarges he will build a house of his own nearby.<sup>38</sup>

It is evident that cross-cousin marriage is the proper marriage among these tribes. Unfortunately Conzemius does not give the kinship terminologies so that it is not possible to compare the kinship structures with that of the Maya.

Among the Chorti of Guatemala<sup>39</sup> a person loses relationship to the household members and rights of inheritance upon moving out at marriage.

<sup>36</sup> There is also a long reference in Torquemada, Book XIII, chapter 7, which indicates that relatives on the mother's side were not considered to be related (J. Eric Thompson). Whether "related" refers to marriage purposes or to kinship extensions is not clear.

<sup>37</sup> A. C. Breton, *Relationship in Central America*, Man, 1919, pp. 188 ff.

<sup>38</sup> Eduard Conzemius, *Ethnographic Survey of the Miskito and Sumu Indians of Honduras and Nicaragua*, BAE-B 106: 146-47, 1932.

<sup>39</sup> Personal communication from Charles Wisdom

Individual families are referred to by animal "nicknames" and there is a feeling, on the part of some at least, that marriage should not take place between persons having the same family "nickname." Tozzer<sup>40</sup> found named groups among the Lacandones with patrilineal descent and some tendency to exogamy, but apparently found no evidence of cross-cousin marriage. The present day Maya of Yucatan<sup>41</sup> seem to have adopted the Spanish kinship system, though still using the native terms in many cases. The only feature which is not clearly European is the disposition to use the old Maya sibling terms and extend them to siblings-in-law.

The tentative conclusions concerning the type of marriage which occurred among the ancient Maya, based on an analysis of the kinship terminology, finds some support in the literature. It is possible that a social structure, based on cross-cousin marriage, was rather widespread in Central America, and perhaps northern South America.<sup>42</sup> It is hoped that further material from the early literature will come to light, and that current field work in Central America will yield additional evidence which may support or modify the tentative conclusions reached in this paper. Some knowledge of the types of social organization of the Mexican and Central American groups seems desirable in any attempt to understand the history of this area. The presence of cross-cousin marriage among peoples as culturally and geographically separated as are the Maya, the Tlingit<sup>43</sup> and Haida,<sup>44</sup> the Woods Cree,<sup>45</sup> the Chipewyan,<sup>46</sup> the Naskapi, the Miskito and Sumu, and some of the tribes of northern South America offers further problems which are outside the scope of this paper.

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<sup>40</sup> A. M. Tozzer, *A Comparative Study of the Mayas and Lacandones*. Arch. Inst. of America (New York), 1907, pp. 40-41.

<sup>41</sup> Communication from Robert Redfield.

<sup>42</sup> Cf. T. A. Joyce, *South American Archaeology* (New York), 1912, p. 22.

<sup>43</sup> K. Oberg, *Manuscript on the Tlingit Indians*, 1933.

<sup>44</sup> G. P. Murdock, *The Kinship System of the Haida Indians* (Manuscript), 1933.

<sup>45</sup> E. S. Curtis, *The North American Indian*, 18, appendix, 1928.

<sup>46</sup> *Ibid*

THE HEHE-BENA-SANGU PEOPLES  
OF EAST AFRICA

By W. BRYANT MUMFORD

DIFFICULTY OF DEFINING A TRIBE

IN THE district of Iringa, Tanganyika Territory, the native, when first asked what is his tribe, usually replies that he is a Hehe: on further questioning he would state that he was a Yinga, Hafiwa, Dongwe, Zunga, Gongo, or Tageta.<sup>1</sup> This is one of the puzzling features of tribal studies in East Africa. It is difficult to know what is a tribe. With equal truth a map could show a hundred or a thousand tribal divisions.

Enquiry into the history of the Hehe people, however, throws some light on the problem. The first reply of the native refers to the general political unit to which he belongs and the second refers to an original smaller tribe from which he traces his connections. The Hehe is the general political unit. The Yinga were a small tribe who took the name of their first great chief Muyinga, and similarly the Hafiwa were a group named after their chief Mhafiwa. The Dongwe received their name and have accepted it as descriptive of a custom of their group to wear special tufts of hair. Zungwa meant the people of the country of the hot sun and so on. It remains to be explained why these different groups existed and still exist within those who call themselves Hehe today.

Sometime in the early eighteenth century a young warrior named Mfwimi is said to have visited a small tribe, whose name is forgotten, in the heart of the country known today as Hehe. He was a wanderer and adventurer and caught the affection of the daughter of the chief. She became pregnant. Before Mfwimi passed on to further wanderings he directed that if the child were a male he should be called Muyinga, and if a female she should be called Nsangala. Not only was the child a boy, but he had extraordinary charm, wise judgement, and became a real warrior. As he grew to manhood he acquired the general esteem of the people and the love of his grandfather, and so, in the way of Africa, he finally succeeded to the chieftainship, became the founder of a great dynasty, and the people after him adopted his name as the name of their tribe.

By marriage the grandson of Muyinga and later the great grandson

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<sup>1</sup> Tribesmen would be known as Wahehe or Vahehe, Vayinga, etc.; their countries as Uhehe, Uyinga, etc.; for clarity the terms in this paper are anglicised to Hehe peoples or Yinga country as the case may be. Throughout this paper acknowledgements should be made to Dr G. G. Brown without whose help, corrections, and criticisms it would never have been completed.



century stopped further growth or any breakdown of the group. Today the inhabitants of the whole dominions are still Hehe, but each subject also belongs to one or another of the smaller tribes of which the dominions were built. Thus a native would first state that he was a Hehe, and later say he was a Yinga or Hafiwa and so on.

What seems to have happened in Bantu tropical Africa is that the early units or tribes were small villages or groups of villages, such as that to which Mfwimi came; then by marriage and conquest, alliances were made and larger units built up. And sometimes a great chief sprang up in one or another area, and by aggression built up a comparatively vast dominion. Furthermore the rise of a great chief in one part usually contributed to the rise of a second great chief at some distant part, for new combinations are necessary for defence. Thus the Ngoni, Hehe, and Masai in East Africa each stimulated the growth of the others. A succession of great chiefs continues the building up process; a weak chief tends to allow the dominions to break down. Where peoples of different culture have been forced into one dominion the breakdown tends to be rapid; where they belong to the same culture the new union tends to be stable.

The thesis suggested is that the tribal unit is not always very important; it may be a changing unit. What is important is to find groups of people of similar culture, similar language, and similar customs. On these grounds it seemed that even the vast Hehe dominions were only part of a greater cultural group. The Sangu and Bena peoples at least had to be added.

This paper is a study, therefore, of the organization and customs of the Hehe, Bena, and Sangu peoples of the southern highlands of Tanganyika, and particularly of the borderland area of Malangali, which belonged in turn to each of the three groups named.

#### GEOGRAPHICAL AND PHYSICAL FEATURES

The three tribes occupy about 20,000 square miles of steppe country. To the north and west they are bounded by the Ruaha river, and to the south by the Livingstone mountains. Parts of the country, as in Bena-land, consist of bare grassy rolling hills; other parts, as in Hehe-land, are mountainous and covered with tropical forest. Still other parts, as in Sangu-land, are bare sandy plains, covered with thorn bush, but the greater part is hilly country more or less covered with scrub and bushy trees.

There is a long and moderately heavy rainy season from November to March: during the rest of the year there is no rain at all and the country is cool, dry and windy. The soil tends to be sandy, but water is obtainable



from most rivers throughout the year. Corn and bean crops do well. The population is scanty, being only 140,000 or about 7 persons to the square mile, so that the larger proportion of the country is undeveloped and uninhabited. Although most of the land is suitable for stock-farming the number of cattle is small.

The people vary greatly in physical features, but on the whole they are tall, lithe, with long faces, noses and hands, non-prominent lips, and light brown to black skins. All three tribes, though the Bena the least so, were great fighters. It will be remembered that the Hehe defeated German-trained troops on the Kilosa road and for a considerable period of time resisted annexation.

#### FAMILY ORGANIZATION

The people of this cultural area live in tembes. A tembe is a house built with sun-dried clay, or wattle and daub plaster walls, with an almost flat earthen roof. Houses may consist of one long building, or have the form of two, three or four sides of a quadrangle. The shape of the hut seems to depend on the character of the district and the idiosyncrasies of the owner. Thus, in Sangu, where there is danger of attack from lions and where the houses are built close together and the village is walled in, the people generally prefer one long building for each household. In Bena, where the huts are very scattered but there is less danger from lions, the tendency is for each hut to be quadrangular. In Hehe, some build in quadrangles, others prefer one long hut. The quadrangular type is preferred but requires more skill in roofing and draining: it provides privacy and defence against theft.

Close by each hut, sometimes in the quadrangles, there are tall bins of woven reeds covered with mud, raised about a foot off the ground by a stick platform, and covered with thatched conical grass lids. These are called chimba and are used for storing the family food supply.

The house consists usually of an entrance room (idama) in which the boys and cattle sleep, and next to it a reception room (bwalo) in which to entertain guests. Attached to the bwalo, each wife has also normally a kind of reception-room-kitchen or idama and a bedroom, kugati. Chiefs and wealthy natives may even build separate houses, each containing an idama and kugati for their various wives. Infants and small children sleep with their mothers. Girls when they grow older go to live with their grandmothers. If this is, for any reason, impracticable they remain at home and are given some sort of a private section of the house in which to sleep.

As is common in polygamous households the father tends to become a

visitor to his homes and wives, and therefore is more aloof and surrounded by greater authority than in European monogamous homes. From birth, a child looks to the father as a power greater even than his mother. The pattern of behavior of obedience, respect, and even awe grouped around the father concept becomes projected to the chief and to the government. This has a dual aspect, for it demands not only obedience from the one in the position of a child, but also responsibility and gifts from the person in the position of father. The native is not pauperising himself when he begs this and that from the Government, when he expects free education or to be found work and be generally looked after: these things are what are normally expected from a parent by a child, and in his opinion he is under no more obligation to show gratitude than the European youth feels he should when he draws his monthly allowance.

The wife has definitely to submit to, and to obey, her husband and is not by any means considered to be the man's intellectual equal. It is not justifiable to state, however, that a woman is without position in the country. In the first place, as a member of her own family she has behind her the strength of the whole group of relatives through her father: it is their business to see that she is happy and properly treated and it is to them that she goes if she is in trouble or for illness or child-birth. Secondly, she can make the home an extremely uncomfortable place for her husband if she does not get her own way. Thirdly, she can, and does, hold property of all and any kind in her own right and takes her share in inheritance of her father's property. Fourthly, as a result of polygamy, motherhood becomes a more intimate relationship than fatherhood: the children pass the impressionable years of their life in continuous and close contact with their mothers, whereas the father tends to become a visitor, albeit an honored one. Small wonder that, in later life, a man is expected to honor his mother and go to any lengths in her defence. Lastly, as an informant pertinently pointed out, it is easy enough to obtain a husband but obtaining a wife is a costly and serious affair. All these things add to a woman's prestige: she is certainly not without honor in her country.

As regards the division of labor in the house, each member—man, woman, and child—has to play his part. The man cuts the heavy firewood, builds and repairs the house, looks after the cattle, breaks new ground for tilling, and, in the old days, fought for his family, and in these days works for them to obtain wages to meet family needs and pay government taxes. The woman draws water, fetches firewood, cares for the food plantation, cooks the food and so on. Both work in the plantations during sowing but the woman does all the weeding and harvesting. The children, as they grow

old enough, take their part too; the boys helping the father and the girls helping the mother.

The first wife has a distinct title, *munyakaya*, meaning "owner of the house," and always remains the wife of honor. Subsequent wives are called *muamberi*. Among the Bena, sons of the first wives seem to have preferred claims to succeed their father. Among the Hehe the title seems to be merely one of courtesy. The existence of two terms for wives, and the occasional preferences for sons of the *mwinyikaye* possibly confirms Torday's view that the first marriage is the real marriage and the subsequent marriages are legalized time-honored concubinage. The first wife, however, welcomes the newcomers, for they are company for her and lessen her work by sharing it. When a man dies, his widows are inherited by his sons or brothers.<sup>2</sup> This is an obligation as well as a privilege and makes destitution impossible.

Turning to their terms of relationship, a man calls his father *dada*, his mother *yuva*, his elder brother *mama*, his younger brother *mwanakwetu* (meaning "a child of ours"), and his sister *muhasa*:<sup>3</sup> a woman reverses the terms for brother and sister, calling her brothers *muhasa* and her sisters *mama* and *mwanakwetu*.

No one stands alone in a primitive community; the unit is a family with particular reference to the male line. Thus the father's brothers share with the father the authority over the children. Furthermore a father's brother may inherit a man's mother on the father's death, hence the extended use of the term *dada* from the father to his brothers. A similar explanation holds for the extended use of *yuva* to include the mother proper and her sisters.

It follows obviously that the children of the father's brothers and the mother's sisters, i.e., the ortho-cousins, are potential stepbrothers and -sisters. This draws the families still closer and leads naturally to the extended use of the terms for brother and sister to include ortho-cousins and forbids marriage with them.

The paternal aunt, *yuvahengi*, and the maternal uncle, *yaya*, who call their respective nephews and nieces *mwipwa*, have no such extended functions. On the other hand there are definite restraints. These restraints can

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<sup>2</sup> This is not always so nowadays. A widow may elect to live with her children or remarry. Similarly if a man's wife died he used to have a claim on her family for a sister. Today these rights may be waived by payment of two shillings, i.e., the equivalent of two hoes (the ancient bride-price).

<sup>3</sup> Some of the terms change their forms instead of prefixing pronominal possessives. Terms of address of the first person only are given in the text.

be readily understood when it is remembered that the maternal uncle and a man's mother, or his paternal aunt and his father are brothers and sisters and separated by sex-taboos. Furthermore, in case of a quarrel between a father and mother, the mother's brothers will take the woman's part, and therefore a potential enmity exists. Hence there is an attitude of "hands off" between paternal aunts and maternal uncles and their nephews and nieces.

The children of paternal aunts and maternal uncles, i.e., cross-cousins, are called *muhisi*. Marriage between cross-cousins is permissible. Hence the paternal aunt and the maternal uncle are potential parents-in-law, and, as such, the relationship is of extreme delicacy and hedged with further restraint and respect. This emphasizes still more the difference between the paternal aunts and uncles on the one hand and on the other, maternal aunts and uncles.

Children of both sexes are called *mwana* and such is the invariable form of address, but for distinction a boy may be referred to as *mswami* and similarly a girl may be referred to as *mwali*. These terms are used equally frequently in their extended sense.

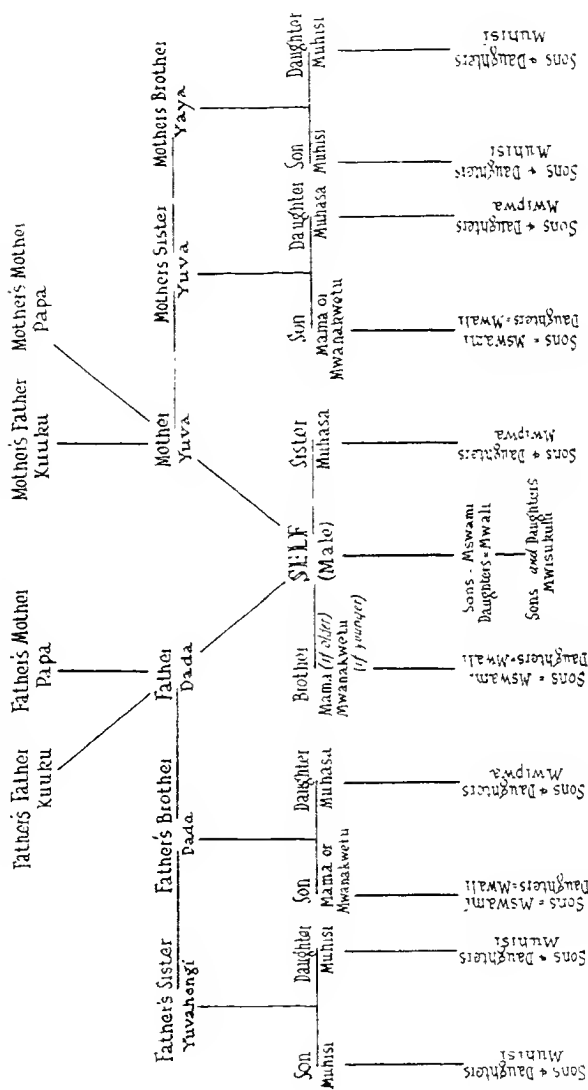
There is no distinction of terminology between grandparents on the paternal or maternal sides; a man's grandfathers are his *kuuku*, and his grandmothers are his *papa*.

A man calls his wife, and a wife her husband, *munuvangu*, meaning "my person." Both call their brothers- and sisters-in-law, *mulamu*, and the term is obviously reciprocal. This relationship is restrained for obvious reasons and necessitates mutual courtesy and respect.

Parents-in-law are called *mukwi* by the man and they reciprocate the term to him. A woman refers to her father-in-law by the more playful term *dadafyala* ("father of the finger") and to her mother-in-law as *yuvafyala* ("mother of the finger"), or simply *yuva* or *mukwi*. These distinctive terms are required because of the strong sex-taboos between a man and his mother-in-law, a woman and her father-in-law, to a lesser degree between a man and his father-in-law, and less still between a woman and her mother-in-law. A woman and her mother-in-law may even use the terms for mother and daughter, showing the affection and intimacy between them.

In brief the system shows bilateral descent for the first two generations. Further descent, however, is traced with greater emphasis on the male line. The terms describe a functional relationship rather than position in a family, hence the many reciprocal forms and the reverse usages when the sex of the speaker is changed.

TABLE 1. HIEFE-BENASANGU RELATIONSHIP SYSTEM



(Self being a male in this table, for a female reverse Muhasa and Mwanakwetu or Muhasa and consequent terms.)

## POLITICAL ORGANIZATION

The chief of either a large tribe or a small unit of three or four villages is called *mtwa*: heads of a village holding delegated authority are called *mzagila*, meaning "agent." When by alliance or conquest one chief acquires a paramountcy over others, he remains the *mtwa*, and those in charge of the units under him become *mzagila*. Under every *mzagila* there are junior agents often called by the same title but more correctly called *mpakasi*.

These officers were all more or less hereditary through the male line, and as a rule it was the eldest son of the first wife who succeeded his father. This custom might, however, be put aside if, for some reason, the eldest son was not suitable, as for example, on account of cowardice, drunkenness, or failing in general esteem. In the case of succession of a *mtwa* one son or even a brother might seize the position by virtue of his known bravery; or a minor might be championed by a powerful group who wished to attempt to maintain their power, generally basing their claim on a statement that the deceased chief had named the child as his successor on his deathbed. A *mtwa* of a large group might also divide his kingdom between two or more of his sons. The general rule would seem to be to follow the deceased chief's wishes unless circumstances demanded them to be set aside.

The *mtwa* represents the heart of his people. When, at the siege of Kalenga (the Hehe capital) by the Germans, the fortress was finally taken and the people believed that the *mtwa* had been killed, they gave up the fight, and the Germans then very wisely concentrated on killing or capturing the *mtwa* in their later campaign.

The primary duty of a *mtwa* was to lead his people in battle; his secondary duties to adjudicate in disputes and generally to father his people. How far his position was of religious significance it is difficult to say: the people are reticent on this point as on all matters connected with their beliefs. If, however, the rains were unusually delayed and there was fear of famine, the people certainly went to the *mtwa* for help, and he would then lead them in prayer and sacrifice on the graves of his ancestors. All chiefs, even the minor ones, possess a measure of magical and religious power, and it would be a very bold person who would dare to brave the socio-religious awe surrounding them by challenging their authority.

The superimposition of one group over another, as for example the establishment of the Hehe chiefs over the Dongwe, usually meant the deposition of the conquered *mtwa*, for there could only be one *mtwa*, the new paramount chief. In general the organization of the *mzagila* under the conquered chief would however be left untouched, though the new paramount chief might appoint selected warrior families in their place.

Each case seems to have been decided on a common sense basis rather than following any rigid rules. In many cases the families of sub-chiefs of villages have maintained their position under two or three different mtwa.

Each mtwa, whether of a large or small group, gathered around him the boys and youths of the country. These bands of youths were called wigendo. They corresponded in some ways to courtiers and attendants: they were clothed by the chief, had to amuse him and followed him everywhere. In other respects they were like pupils in a school, for they were given specific instruction, particularly in warfare and general deportment. In a third respect they correspond to candidates at initiation ceremonies, for they received instruction in tribal lore and sex, and passing out from the wigendo marked the change to manhood. After leaving the wigendo, a man was allowed to marry and found his own home. All boys of any importance had to serve their time as wigendo: even the sons of the mtwa were not excused service, though they had the special title waluka.

Over each group or company of wigendo the mtwa chose one of their number to be sub-chief or mzagila. For this honor the chief usually gave him two head of cattle. Each group with its sub-chief chose for itself a name: this name usually represented in some flattering way their strength, bravery, or skill. Thus one group was called wanayaliosi, meaning "We leave behind us fire and smoke," and another was called walaya, meaning "We have the skill and wisdom of Europeans."

Whereas the Hehe maintained in training all able-bodied males, the Bena and Sangu kept a separate standing army, the mnyingutwa. On the march, tried troops were put in front, followed by companies of newer men, followed again by the chief and his bodyguard, while a further batch of tried but older men brought up the rear.

On the whole, fighting was conducted on moderately chivalrous lines unless there was some special reason for revenge or punishment. In all campaigns men and women captives were brought back as slaves. They would have to do menial work for their masters, but they were treated generously and allowed to marry into their conqueror's tribe. Sons of slaves were free members of the tribe and former slaves have even been known to fight for their adopted country against that of their birth.

In peace the chief slept with his favorite wife in an inner room of his house. In the adjoining entrance hall, through which was the only entrance, slept numbers of immature children, so close that no one could pass over them without treading on one and giving the alarm. At each door there were selected guards and outside again were the wigendo.

The court consisted first of these wigendo, over whom were the perma-

nent court officials corresponding to stewards, clerks, and attendants. These were called *mtambuli*. At a full meeting of the people the chief would announce that such and such among these attendants was promoted to be a sub-chief or *mzagila*, corresponding very roughly to a knight of the court. The highest honor which could be bestowed upon a subject was to grant him the daughter of the *mtwa*, thus adopting him into the royal family and giving him the title *mwanamtwa*, or son of the chief.

#### CUSTOMS, CEREMONIES, AND BELIEFS

The preceding paragraphs have outlined the general organization of these tribes: the following paragraphs are based on a series of essays written by native school teachers on the staff of the writer, describing customs, ceremonies and beliefs. It must immediately be admitted that these vary from place to place and those given here are typical in general theme rather than detail.

The approaching birth of a child is one of the most important family events and one in which both the maternal and paternal sides are interested. Not only are natives fond of children for the same reasons as Europeans, through natural love and natural pride, but there are, in addition, strong economic and social reasons making children desirable and making barrenness a disaster and a curse. To the mother, a son, especially the first son, means increased prestige, and protection and honor in her old age. To the father, a son means aid in warfare, an increase of power of the family in tribal councils, and the carrying on of his name and traditions. A daughter shares the household tasks and therefore lessens the mother's domestic burdens: she works in the plantations and therefore increases the family's potential wealth. Furthermore a time will come when someone will wish to marry the daughter: this will mean an alliance with another family power and further increase in the wealth of the family through the receipt of the bride-price. Small wonder that great care is taken of the mother during the carriage of the child and that the birth is celebrated by feasting.

Towards the end of pregnancy it is the custom for a woman to leave her husband and to go to live with her mother; but if her mother lives too far away or is dead, then she goes to live with her husband's mother. As soon as the pains begin, two or three old women, with a reputation for skill in these matters, are called in to help. These midwives place the expectant mother in a comfortable position (usually sitting) in a separate room and try to keep her cheerful. If the labor progresses satisfactorily, they do not interfere. If however, labor is difficult and prolonged, they begin to question the woman as to whether she has not committed adultery. Whether the



COMPARATIVE TABLE  
GENERAL ORGANIZATION OF GOVERNMENT, ARMY, AND HOUSEHOLD IN THE THREE TRIBES

	<i>Hehe</i>	<i>Bena</i>	<i>Sangu</i>
1. Standing trained troops	No special name. All able bodied men were trained troops.	Nyingutwa*	Nyingutwa
2. Chief's bodyguard	Tengeremtwa. Warriors selected from each company just before each action.	Tengeremtwa. A standing body of selected men who swear to die before their chief.	Nyingutwa
3. Domestic and sleeping arrangements	Chief sleeps in inner room; in the adjoining hall sleep small immature children called nyansoli. At each door there sleeps a slave or nyamlango (meaning "men of the door"). Outside in a separate house lie the wigendo.	Chief sleeps in the inner room; in the adjoining room sleep the women-servant-slaves (nyiwingi). In the next outer room sleep the wigendo.	Chief sleeps in the inner room; small children (nyansoli) sleep in next room as for Hehe. Further attendants in house close by

\* Note: stem forms only of all ranks are recorded here for clarity.

In each tribe one of the small children wakes the chief.

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|---|--|--|--|
| 4. Menial staff                               | For any special work, such as working on the chief's plantation, repairing buildings, etc., the chief's headmen select men in turn from the settlement: they are helped by the wigendo and slaves. | First the small children are sent out to work, then if required the wigendo go to help; lastly the army of nyingutwa may be called in. | The menial staff and general attendants are called wanandge; their leader, the chief steward, is in constant attendance on the chief. For all but routine tasks the small children in the settlements are summoned. They are called nyavira: bright children are chosen to be wigendo. For extraordinary tasks the nyingutwa, and finally all people, may be called. |
| 5. General court<br>Attendants in<br>training | Wigendo  | Wigendo  | Wigendo  |
| 6. All permanent<br>court officials           | Tambuli  | Tambuli  | Tambuli  |
| First rank:                                   | Zagira   | Zagira   | Zagira   |
| highest rank                                  | Senga  | Senga  | Senga  |
| Prince  |  |  |  |
| Other males of<br>royal house                 | Lugu   | Hewere   | Njoli  |
7. Highest honor which can be bestowed by a chief in all tribes is to give in marriage a daughter of the royal house, and give the honored person the rank of mwanamtwa or son of the chief.

accusation be true or not, the woman will at first deny it. If the midwives see that the labor continues to be difficult they will speak in angry tones to the mother: "It is better that you should speak at once; for if you do not acknowledge your sin, you may die in your labor, or the child may die before it is born." The woman then perhaps confesses, and the midwives will demand the name of the father, which she will have to tell them. After this the midwives give her medicine to assist the delivery, which owing to the potency of the drug usually then proceeds without more difficulty. If, however, the difficulty continues, one of the midwives will wash her hands and then smear them with the gum of a special herb, and inserting her hand into the woman, try to put the baby in a correct position or to pull it out.

It should be noted that the midwives may not under any circumstances whatever repeat the confession of the mother. Should the husband ever find out that another man is the probable father of the child, he may demand from him compensation of at least three cows. Under such circumstances, after paying the cows, the blood-father would however take the child away to his own home, for it would be his by right.

After the child is born he is examined by the midwives, and if he has any blemish or is in any way crippled, they would probably strangle him forthwith. If he is allowed to live, the navel is tied with cord and the cord attached to the child's forearm so that any movement will help to pull it out. The afterbirth is taken out and thrown down the hole of an ant-bear.

For five days, while beer is prepared for a feast, the mother rests. On the fourth day, however, she gets up, sweeps out the room, and collecting the dirt buries it at the foot of any tree which is in fruit at the time. This is in order that she may be as fertile as the tree and able to bear again. After the end of the five days a feast is held and the father and relatives summoned to see their child.

After eight or ten days, the mother and child return to their home. It is not customary for the father to have intercourse again with this wife for at least two years after the birth of the child, or as long as the mother suckles her offspring.

The training of children in early years among natives, as among Europeans, is incidental rather than formal and therefore difficult to describe in detail. Up to two years of age, a child never leaves his mother. In the hut he is laid on a blanket near the fire, or he may be left lying out in the sunshine. If she goes to draw water or to work in the plantations she places him in a sling on her back and takes him with her. He is fondled and fussed over by everyone just like a European baby, but with more abandon, and every

wish is instantly satisfied. He is never allowed to cry and at the first sound his mother will pick him up and nurse or feed him.

It is not until he is able to talk reasonably and run about that any effort is made to make him into a social being, and even then the beginning is very gentle. Control of the bladder and bowels is not taught until about the age of five, and failure in control is not considered serious. During these years he runs around freely, following his mother everywhere and pretending to help in her work. Already, however, the family is beginning its incidental lessons: from his mother's treatment of his father, and from the occasional visits of that august personage he learns respect and obedience, learns to be cheerful and self-controlled, and so on. Thus even in these first years there grows up within him a sentimental devotion to his mother and a feeling of awe and respect for his father, and through the father for his family and tribal authority generally.

After the age of five more serious training is begun. A boy leaves his mother's room and goes to sleep with his brothers among the cattle; a girl joins her sisters in their room. Each now has to learn to take his or her part in the household tasks. Roughly speaking, boys herd and milk the cattle, run errands, and do as their father bids them. Girls stay with the wives, work in the plantations or help grind corn, cook, and draw water. As the years pass, girls and boys each go more and more their own ways.

Visitors from the families of the mother and father, from neighboring families, and from the chief may come to the home, and by imitation and precept the children learn their relationship to the tribal life. A message may come one day from the chief summoning the father to work, either for the Government or the tribe, and the child begins to realise a man's liabilities to society. In every branch of life, whether it be in building houses, breaking new land, dancing and feasting, or other activity, the child has to learn a network of mutual obligations.

As boys begin to show signs of becoming men a change occurs in their treatment. They must become hardened and made fit to carry on the name of the tribe. In most tribes this training is crystallised in the initiation ceremonies. Amongst the Hehe-Bena-Sangu peoples, however, there is no trace of such a ceremony today, and the records of earlier investigators show that there have been no such rites in the tribe for the past sixty years. Its place seems taken by the wigendo training of which mention has already been made. One other outward symbol of the change is made: this consists of the boy choosing for himself a new name and casting aside his child-name, which no one thereafter would mention.

The transition from girlhood to womanhood is a more sudden change and involves bigger issues. Not only do the girls' initiation or *luwungu* ceremonies mark the onset of menstruation but they announce publicly the change in her status and her eligibility for marriage. It is essential therefore to ensure her instruction in sex matters both in preparation for marriage and to prevent accidental pregnancy.

When a girl shows the first signs of approaching adolescence, her mother seeks out an older woman to arrange for the girl's instruction and initiation ceremonies. On the day arranged, the selected instructress, together with several other grown women, takes the girl to the foot of a tree in fruit. After ensuring that there are no men within sight or hearing, they strip the girl naked and teach her how a husband and wife live together and what they do. Very little is left to the girl's imagination. Then the instructress seizes the girl, and after warning her not to cry, for if she does her father and mother may sicken and die, cuts the clitoris with a sharp knife. Some hot medicine from a calabash is then put on the wound, and the instructress and her companions sing the following song. "The lion has eaten the meat and left only the bones." The interpretation may simply describe the robbing of actual flesh or it may symbolise that the sex act is now robbed of some of its pleasure though its purpose remains.

They then sing some more songs, mostly of a crudely sexual character and, after warning the girl not to be afraid when her first menstrual flow begins, they return to their homes. The girl remains in her room until the clitorodectomy is healed, and during this time she is not allowed to bathe. When the wound is healed the instructress and her companions return. For a whole evening they dance and drink; then in the morning they take the girl down to the river to bathe. As they go they sing lewd songs about the doings of husbands and wives. The girl is again stripped, but this time two full grown women strip with her and all three go down to bathe and dance in the river. One woman ties up some grass in the likeness of a snake (a phallic symbol?) and placing it on the legs of one of the naked women says, "This is the snake that moves and bites." At these words the other falls down and feigns death. They then turn and ask the girl, "What are you going to do to pay the husband of this woman whom you have killed?" The girl does not answer but just stands weeping. Then they explain that this is to teach her not to go with a man who is not her husband, for if she does, her husband may kill her even as the snake killed this woman. They then revive the woman by sprinkling beer upon her, saying to the girl, "Do not be afraid when your husband approaches you: these things will make a new life rise in you even as new life came to this woman, and you

will be able to bear a child." Wrapping the girl in a new cloth they all return to the village, where the parents of the girl give the instructress a hoe for her services.<sup>4</sup> Ceremonies then cease until the girl's first menstruation.

When the girl sees the blood of her first menstrual flow, she must call out "tii . . . tii . . .," meaning obedience or submission. She is then taken to her room where she has to remain for five days and is instructed in matters of hygiene and decency to be observed on subsequent occasions. On the sixth day, the instructress brings a basket which has been painted half red and half white. The red they explain is the color and sign of womanhood, representing the menstrual flow, whereas the white is the color and sign of the potency of man. They then have a further talk with her about sexual matters and warn her against going with any man until she is married, for it will no longer be just play and she may find herself with child. They also warn her that she must lie by herself for six days on each menstrual period even after she has been married. Afterward all return to the public room to drink and dance. The neighbors are invited for the feast in celebration of the fact that the daughter has now become a woman.

The next important crisis in the life of both boys and girls is marriage. Often the boy is allowed to select his own wife, though it is also common for his parents to select one for him. When a boy has settled on the girl of his choice, and has persuaded her to consider him as a suitor, he must search out two older women to tell his parents. His parents then consider the matter and, if they approve of the match, visit the parents of the girl. On this formal visit the boy's parents, after being received into the girl's home, sit for a while silently at the back of the room. Finally they say to the girl's parents some such words as, "We have come to offer our assistance to you for cutting firewood," and the girl's parents reply, for example, "We do not believe that you have come to offer your help to cut firewood; you have never done so before and we do not need your help." After a pause, the girl's parents continue, "We know what you have come for: you have come for our daughter." Then they add, "We have no daughter," or "Our daughter is already engaged to another man," although neither statement may be true. After a further prolonged silence, the boy's parents get up and go away.

The form of the introduction of the subject varies considerably. The principle however, remains the same. The subject must be approached in-

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<sup>4</sup> The money system consisted of beads, hoes, goats, and cattle. Roughly, 10 yards of beads equal 1 hoe; 20 hoes equals 1 cow. Goats are also used in varying values between hoes and cows. It will be noticed that these articles are used continually in the following ceremonies.

directly and symbolically, and the bride's family, to show the importance of their daughter, must be reluctant. The example quoted probably signifies that the daughter is a component worker in the household and the offer of help suggests compensation for taking away one of the workers.

Three days later some of the brothers of the boy's father go to call on the girl's parents, taking with them a new hoe with beads wound around the handle. The hoe symbolizes the work of the girl as the caretaker of her future husband's food plantations, and the beads express his compliments and appreciation. After entering the house, they also sit silently at the back of the room with the hoe in front of them. If the father of the girl is set against the match, he seizes the hoe and puts it outside the house, telling the relatives of the boy that he does not want to see them again. If he is willing to consider the match, he too sits in silence. When, however, the boys' relatives begin to touch upon the match, he may feign anger, saying that he will not consider the marriage for a moment, and the boy's relatives go away, taking the hoe with them. Again and again the girl's father may refuse the relatives of the boy in this way: but the relatives continue to come, each time bringing the hoe and placing it in front of them. These delays emphasize the importance of the girl and her family. Finally one day the father says, "Well, let us see whether the girl herself is willing to be married to your son," and he calls the girl and asks her, saying, "So and so wants to marry you: do you love him? If so, you must say so now and never afterwards say that we made you marry a man whom you did not love." If she loves the boy she takes a step towards the hoe; her father, however, may stop her with a sharp look. She must think well before she touches the hoe, for she is betrothed as soon as she has taken it, and it is not considered decent to be won too easily. The boy's relatives, however, go away happily, for the girl has given a sign that she loves their kinsman.

The parents of the girl then brew a large supply of beer, and call in all their relatives for a feast and a meeting of the family to discuss the match. If the relatives approve, the boy's family is then invited to a feast, and the girl is permitted to take the hoe as a sign that she accepts the boy as her betrothed.

Two days later the girl's parents send a basket of beans as a gift to the boy's parents: a sign that the girl recognises the boy as her fiancé. The beans probably are a symbol of fertility or of the girl's future task as provider of garden produce. The boy's family return the basket with a second hoe as a sign of respect for their future marital connections.

The boy is now expected to help his future father-in-law whenever he is needed, and the girl's family is not usually backward in making use of him.

The parents of the girl now state what surety or bride-price they require. Two cows and a bull, or three cows and a bull, or two sheep, twenty shillings, and three hoes is the generally accepted amount.

If the girl's family do not think one of the cows sent is good enough, they return it and demand another in its stead, but do not always get it. After a passage of time and some discussion the matter of bride-price is finally completed. The two families then arrange together for the marriage feast.

On the day arranged for the wedding the boy's family, the girl's family, and the people in the surrounding villages come together and there is a great deal of drinking, singing, and dancing. At dusk some of the women of the boy's family dance over to the bride's house to fetch the bride. Later they return carrying the girl while they sing and dance. The procession continues to the boy's house. The bride and groom are then conducted to their room by two women, one from the bride's and one from the groom's family. Occasionally these two women remain to instruct the young couple in their duties and to make sure that the groom is not impotent. When they are satisfied that all is well, these two women go and announce the fact to the wedding guests, and there is more drinking and merriment. The next day the bride and groom come out from their room and the relation of both sides kiss them and give them gifts.

After the marriage there is a general atmosphere of sex taboo and restraint between a man and his mother-in-law. He must not look her in the face, nor sit near her; if he meets her on a path he must step aside into the bush. Nevertheless, as long as the man or his wife live his parents-in-law have always a special claim upon his services, and if they call him he must obey at once.

#### KELIGIOUS IDEAS

The members of this group of tribes believe in one god, whom they call nguluve, and also in the spirits of their ancestors, whom they call misoka. Their god, nguluve, is somewhat intangible and distant. He is a first cause rather than an ever present influence. He created the world, and maintains control over large events, but the affairs of individuals are more under the influence of the ancestral spirits who may, in important matters, intercede for their children on earth. When in personal trouble a man prays to the spirits of his close relations: when the tribe is in trouble, in times of drought or disaster, the chief leads the whole tribe in sacrifice and prayer at the burial ground of his ancestors. The power and interest of ancestor wanes in time as memories of him die and hence sever his connection with the world.



In relation to wrong doing there is a clear distinction between an anti-social act, such as stealing or adultery, and anti-religious acts, such as the breaking of a taboo. The former are offences against man, and the offended party must be compensated and the matter put right. Thus today an adulterer has to pay a bull and a cow, and the offending wife has to pay a cow, as compensation to the offended husband.

The latter offences, i.e., the breaking of taboos, are offences against the god which will bring immediate and awful consequences, such as mysterious illnesses or some similar disasters. No one in his right mind would break a taboo. It might however be done accidentally. Hence we find that a sick person will call in a witch-doctor to try to ascertain whether he has broken some taboo or in what other way he has offended, and how he is to make his peace.

Taboos seem to be of two kinds. First there are certain things which must not be eaten by members of one family. These are inherited through the male line and are called *mzilo*. To these may be added new taboos discovered by a medicine-man when attending a patient: he may suspect heart trouble and consider that this is a message that the eating of a heart is taboo to members of that family or perhaps to that person only.

It may be noted in passing that the possession of common taboos, though inheritable, is not, however, in itself a bar to marriage. If two people desiring to marry discover a common taboo, they must then investigate their family trees to make sure that they do not fall within forbidden degrees of relationship. The common taboo presumes relationship only, and is only a bar to matrimony in that sense.

The second kind of taboo consists in generally forbidden acts, such as sex-taboos. A breach of these is not so serious in some ways as the breaking of the first kind. Breaking a sex-taboo consciously would create an atmosphere of social horror and may, if brought to court, bring a very heavy punishment to the offender.

Then there are taboos which forbid a woman assisting at the digging of a grave, or divulging that she has resorted to charms to become pregnant: in either event the child within her is likely to die.

Lastly, there are certain injunctions. There are rules of respect to elders, hospitality, good manners, and the like. Failure to conform is similar to breaking a taboo and brings its own inevitable punishment when the supernatural powers are sufficiently disturbed.

THERE have been various instances of cave burials, with skeletons either interred or exposed in caves, reported from the Maya area. In Yucatan, Mercer found five or six disintegrated skeletons on a cave floor, and human bones, some split, among rubbish in other caves.<sup>1</sup> Thompson found bones in and on the floor of caves near Oxkutzcab.<sup>2</sup> In the Old Empire, a cave burial was found at Piedras Negras under circumstances which suggested a religious association for the place.<sup>3</sup> Blom reports a cave at Zopo, Tabasco, which may have been used for burial purposes.<sup>4</sup> Gordon, in exploring caves near Copan, found one containing a skeleton seated with chin on knees, another holding an extended skeleton, and another having a floor two feet deep in bones, most of them scarred or calcined.<sup>5</sup> Gordon suggests that the last is a deposit of partly cremated bodies.

With the exception of Copan, these cave remains have been assumed by those who found them to be contemporaneous with Maya occupation of the adjacent sites, rather than indicative of an earlier or a later population.<sup>6</sup> While the pottery from Copan caves is different from that found in the city, there is nothing to suggest a post-Conquest use of the caves. It has been generally accepted that no phase of Maya occupation was consistently cave-dwelling, but that the Maya in nearby cities used caves sporadically at special times or for special purposes.<sup>7</sup>

Gordon says that we know, from early Spanish writers, of a Maya cave cult, with a cave god, and suggests a possible connection with the Nagualist cult described by Brinton.<sup>8</sup> A passage from the Ninth Pastoral Letter of Bishop Nuñez de la Vega, written from Ciudad Real de Chiapas in 1698, bears on the possible connection of cave burials and Nagualism:

"The bones of these pagans have been venerated to this day, as though they had been Saints, the people taking copal incense and flowers to the caves where they are set. Hence we have taken many and burned them.

<sup>1</sup> H. C. Mercer, *The Hills Caves of Yucatan* (Philadelphia), 1896, pp. 36, 131.

<sup>2</sup> E. H. Thompson, *Archaeological Researches in Yucatan*, PM-M III, 1. 5-6, (Cambridge), 1904.

<sup>3</sup> L. Satterthwaite, *Piedras Negras Preliminary Report on Burials* (MS).

<sup>4</sup> F. Blom and O. La Farge, *Tribes and Temples* (New Orleans), 1926-27, pp. 156-57.

<sup>5</sup> G. B. Gordon, *The Caverns of Copan*, PM-M I, 5: 7-9 (Cambridge), 1898.

<sup>6</sup> E. H. Thompson, *Cave of Loltun, Yucatan*, PM-M I, 2: 22 (Cambridge), 1897. Mercer, *op. cit.*, p. 167. Satterthwaite, *op. cit.*

<sup>7</sup> T. A. Joyce, *Mexican Archaeology* (London), 1914, pp. 277, 352. O. Ricketson, *Burials in the Maya Area*, AA 27. 394 (Lancaster), 1925.

<sup>8</sup> Gordon, *op. cit.*, p. 10.

that this detestable sect of the Nagualists may be utterly eradicated."<sup>9</sup>

However, an examination of such material as is available<sup>10</sup> leads us to the conclusion that there could be no connection between pre-Columbian Maya burials or a possible pre-Columbian cave cult, and the practices known as Nagualism.

In the Spanish colonial use of the term Nagualism to describe the Indian religion as it was organized against them, there is a confusing expansion of a term which was originally rather limited. Nagual, among the pre-Columbian Maya, seems to have referred to the animal double, guardian spirit of the individual. Among the Nahuatl peoples, the *naualli* was the sorcerer, diviner and soothsayer, while the guardian spirit of each person, determined by casting his horoscope, was known as his *tonalli*. The nagual or *tonalli* could be dealt with only by supernatural means, hence the priests who controlled these things would almost automatically become sorcerers and soothsayers. Although, in Mexico, the *tonalpouhque* were the men who determined the *tonalli* of the new-born child by horoscope casting, the term *naualli* (pl. *nanahuatlín*) and its variations always implied the magician, the sorcerer. It is possible, then, to apply the term Nagualism to the pre-Columbian Mexican-Maya cult of the guardian spirit, associated with sorcery. How much this was an independent phase of pre-Columbian religious life, or how much, due to its dependence on the calendar, it was integrated with other religious manifestations, we have at present no means of knowing. It would probably have been, like all magic, of great importance in the life of the people, but not necessarily officially rated high. It can well be seen, however, how after the Conquest the nagual beliefs could come to dominate what was left of the old religion, and to impose on it their name, so that it became known as Nagualism.

Our best description of Nagualism as a post-Conquest secret force and organization comes from Nuñez de la Vega.<sup>11</sup> What the Bishop has to say substantiates the picture given by Brasseur de Bourbourg<sup>12</sup> of the old religion reorganized; patterning itself on Catholic ritual, the better to counteract the effects of the latter. The descriptions of Indian society by Spanish writers of the sixteenth century show the *naualli* well-established as diviner

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<sup>9</sup> A. W. Payne, *Calendar and Nagualism of the Tzentsals*, *Maya Society Quarterly*, I, 2: 64 (Baltimore), 1932. Also translated by Brinton, *Nagualism* (Philadelphia), 1894, p. 21.

<sup>10</sup> See Brinton, *op. cit.*, for a discussion of Nagualism and references to primary sources.

<sup>11</sup> F. Nuñez de la Vega, *Constituciones Diocesanas del Obispado de Chiapa* (Rome), 1702, pp. 9, 10, 19, 47-48, 106, 134.

<sup>12</sup> C. E. Brasseur de Bourbourg, *Histoire des Nations Civilisées du Mexique et de l'Amérique-Centrale*, IV, 821-22 (Paris), 1859.

and sorcerer; an important factor in pre-Columbian Mexico. It was he who, after the Conquest, could best offer hope for the future and, by enchantments, temporary escape from the slavery of the present. It was only natural that, with the suppression by the Spanish of the titular heads of church and state, it should be the nanahualtin who dominated and reorganized the post-Conquest native religion into a bond that would unite all those who hated Spain. Their meeting-places were abandoned buildings, woods, and caves, of which the last named are the most satisfactory spots for forbidden practices. The objects worshipped in caves after the Conquest, whether carved idols or decorated skeletons, were undoubtedly associated with Nagualism. This cult may therefore have come to be under the protection of the Cave God (Votan among the Tzentsals; Tepeyollotl or Ozo-teotl among the Aztecs): a deity typifying the Earth, common father of all, according to Brinton,<sup>13</sup> and considered by Seler to have been introduced into Mexico proper from the Zapotec, Mixtec, or Maya areas to the south.<sup>14</sup> But there is nothing to connect whatever later cave cult there may have been with the pre-Columbian nagual cult.

Social and political factors placed post-Columbian Indian religion under the control of the nagualist priests and drove it to celebrate its rites in caves. The discovery of cave burials in Old Empire Maya cities, Copan and Piedras Negras, points to a use of the caves by Old Empire people that might have had some connection with a possible cave cult. Since these cities were long deserted at the time of the Conquest and show no signs of post-Conquest occupation, there can be no connection between their cave burials, and the post-Conquest reorganization of native religion known to the Spanish as Nagualism.

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<sup>13</sup> Brinton, *op. cit.*, pp. 38, 41.

<sup>14</sup> E. Seler, *Das Tonalamatl der Aubin'schen Sammlung und die verwandten Kalenderbücher*, ICA 7 559, *seq.* (Berlin), 1890.

THE IDENTIFICATION OF  
THE MASCOUTENS<sup>1</sup>

By TRUMAN MICHELSON

IN MY review of Skinner's Observations on the Ethnology of the Sauk Indians<sup>2</sup> I briefly indicated why I thought that there must be two sets of Mascoutens. At the time I was unaware that Blair, Indian Tribes of the Upper Mississippi Valley and Region of the Great Lakes,<sup>3</sup> had noted when speaking of the Potawatomi, "Those who lived in Illinois and Wisconsin were known as the Prairie band, or Maskotens—which appellation caused some writers to confuse them with the other Algonquian tribe 'People of the Prairie' in latter times known as Mascoutins," thus silently correcting the article *Potawatomi* in the Handbook of American Indians.<sup>4</sup> However, Skinner, in his work, The Mascoutens or Prairie Potawatomi Indians,<sup>5</sup> ignores both my review and Miss Blair's note, and relies upon the article *Potawatomi*, signed by Mooney and Hewitt, in the Handbook. In justice to these writers it must be stated that the article is a good deal more cautious than one would judge from Skinner's language. However, it is to be presumed that these authors based part of their conclusions upon the article *Mascoutens* in part 1 of the Handbook<sup>6</sup> signed by Mooney and Thomas. But this article, as well as the synonymy at the end of it, I regret to say, has many loose and inaccurate statements, and important facts are missing in both the article and synonymy. I am absolutely at a loss to explain this painful situation, nor is it possible for me at this late date to determine the responsibility. But I feel as a member of the Bureau of American Ethnology that the only thing to do is to rectify and supplement the article *Mascoutens* (and incidentally some other articles) to the best of my ability.

The article *Mascoutens* contains the following: "The modern Foxes use the term Muskutáwa to designate themselves, the Wea, Piankashaw, Peoria, and Kaskaskia," and the synonymy at the end refers to Gatschet's Fox MS. (in possession of the Bureau, dated 1882. I have verified the reference to Gatschet's manuscript and state positively that he is misquoted. He does not say that Muskutáwa (so in his manuscript, not Muskutáwa; hence the synonymy is to be corrected, and also the synonymy

<sup>1</sup> Printed by the courtesy of the Smithsonian Institution

<sup>2</sup> AA 26: 93-100, see especially p. 94.

<sup>3</sup> Vol. I: 302, n. 205 (Cleveland), 1911.

<sup>4</sup> BAE-B 30, pt. 2 (Washington), 1910

<sup>5</sup> PMM-B 6, no. 1, 9 (Milwaukee), 1924

<sup>6</sup> BAE-B 30, pt. 1 (Washington), 1907

at the end of part 2 of the Handbook) is used by the Fox to designate themselves. From page 4 of his manuscript it is very obvious that Gatschet intends to give Muskútawa primarily as the Fox designation of Peoria, and secondarily of Piankishaw, Utakámi, Wea, and Kaskaskia. This important information is not utilized in the article *Peoria* in part 2 of the Handbook nor in the synonymies. Nor is the information to be found in the late Dr Jone's Fox Texts utilized there. In these we are told that Maskôtaw<sup>a</sup> (and variants: MA'ckutaw<sup>b</sup>) of Michelson) is the Fox name for Peoria. These texts<sup>7</sup> were too late to be of service in part 1 of the Handbook, but not for part 2. In this connection I quote Forsyth (in 1827) *apud* Miss Blair's work cited above:<sup>8</sup>

Mascotins. . . All those different bands of the Ninneway Nation spoke the language of the present Miamies, and the whole considered themselves as one and the same people, yet from the local situation of the different bands and having no standard to go by, their language assumed different dialects, as at present exists among the different bands of the Sioux and Chipeway Indians. [Ninneway of course is Illinois.]

And soon after my first trip among the Fox Mrs Joseph Tesson, born in 1847, and a close kinswoman of William Jones (mother or maternal aunt?) by adoption, told me that the Maskôtaw<sup>a</sup> were the friends of the Miami and spoke practically the same language. Neither of these items was available when the second volume of the Handbook was published. But note in the synonymy at the end of the article *Mascoutens* we find "*Musketoons*.—Writer of 1778 in Schoolcraft, Ind. Tribes, III, 561. 1853 (collective name for Wea, Piankashaws, etc.)." I have looked up this reference and can not understand how this statement was made. The Piankashaws, Musketoons, and Vermilions (= Kickapoos) are merely bracketed together, and it is stated, "These nations are intermixed." We read further, "They live on and near the Wabash, towards Illinois." There is no mention whatever of the Wea. In the article *Mascoutens* the whole is ignored. And in the article itself we read, "The last definite notice of them is in Dodge's list of 1779. . . . After this the Mascoutens disappear from history," notwithstanding that in the synonymy immediately following we find under

<sup>7</sup> I do not know who Jones' informant was, and although I discussed a number of points with his father, Henry Jones (who was a half-blood Fox), if this topic ever came up, I have no record of it. It should be mentioned, however, Henry Jones was in Kansas with the Fox when the Peoria were there, and would certainly know who were meant by Maskôtaw<sup>a</sup>. I do not think that any Fox today could identify the tribe. For a partial identification somewhat after 1911 see below.

<sup>8</sup> Vol. II 200, 201, see also p. 202 (Cleveland), 1912

*Musquitans*, "Writer of 1812 in Schoolcraft, Ind. Tribes, III, 554, 1853." Looking up this reference I find that the "Writer" is an army officer who in 1812 estimated the combined warriors of the Piankeshaws, Kickapoos, Ojatanos (= Weas) and Musquitans to be one thousand! Of course the fact that Forsyth in 1827 (see *supra*) knew the Mascoutens as a distinct people was unknown at the time the Handbook was published. Recapitulating then, it is clear that the Mascoutens were a member of the Illinois, and identified by the Fox primarily as the Peoria, and secondarily as a group of peoples.

Going back once more to Gatschet's Fox MS., it is well to note Utakámi. This is utilized in the article *Peoria*,<sup>9</sup> under the form Utagami with information correctly reported from Gatschet. It is the name of a Peoria band that was virtually annihilated. This article contains the following: "Utagami, according to Dr Wm. Jones, may mean the Foxes who were known to the northern Algonquians as Utúgamig, 'people of the other shore.'" Now variants of this synonym of Fox are well-known and require no discussion, but I can not help thinking that the likeness may have unconsciously influenced Mooney and Thomas in making their rash statement (see above). Nevertheless the statement on page 3 of Gatschet's manuscript (see above) is explicit. It must now be added that after "Kaskaskias" Gatschet's manuscript reads "all other prairies of Illinois, prairie: múkuta, pl. muskuta'k." What is meant is not entirely clear to me: ma'ckutaw"<sup>10</sup> (in my transcription) means "prairie" in Fox and is inanimate grammatically, and MA'ckuta'ag<sup>ki</sup> (MA'ckutawag<sup>ki</sup>) means etymologically "peoples of the prairie" and is animate grammatically. A misunderstanding of some sort is obvious.

Another point now should be brought up. Allouez in the Jesuit Relation of 1669-70<sup>11</sup> says (in the English translation), "the Machkoutench, who are called by the Hurons Assista Ectaeronnon, 'Nation of Fire.'" So much is general knowledge.<sup>11</sup> I wish here to note that in a copy of Potier's manuscript, dated 1751, which is in possession of the Bureau of American Ethnology is to be found "ya tsistaeronnon = Mask8tens." Why this important confirmatory statement is not utilized in either the main article or the synonymies is a question which I can not answer.

<sup>9</sup> BAE-B 30, pt. 2, 228.

<sup>10</sup> Thwaites, ed., Jesuit Relations 54-227 (Cleveland), 1899.

<sup>11</sup> See for example, Shea in Schoolcraft, The History and Condition of the Indian Tribes IV, 244, 245 (Philadelphia), 1854, also Wisconsin Hist. Soc. Coll. III, 131, 132 (Madison), 1857. I silently correct some minor errors—a more serious one will be treated below. Why reference to Shea is not made in the article Mascoutens of the Handbook is a mystery to me, for it seems as if Shea's essay in Schoolcraft had been partially utilized.

I can find nothing to justify the inclusion of Assistaeronons (and variants) in the synonymy at the end of the article *Potawatomi* in part 2 of the Handbook. It is known that Ondatouatandy in the Jesuit Relation of 1648 is a Huron designation of Potawatomi; and Potier's designation of 1751, Ndaton8atendi, as well as the modern Wyandot designation Undatomátendi for the Potawatomi (according to Gatschet's Wyandot MS., dated 1881), are, I am glad to say, both utilized in the synonymy at the end of the article.

If the above were not enough to firmly establish the fact that Mascoutens and Potawatomi were not the same, other considerations would show it. Thus we find in Charlevoix, *History of New France*,<sup>12</sup> "The Potawatomi say Mascoutins, and it is from them that we have taken the name." Note too, the modern Ottawa consider them entirely distinct peoples.<sup>13</sup> The Fox call the Potawatomi Pe'kîni'Ag<sup>kî</sup>, which in my opinion does not mean "grouse people," as thought by Gatschet, but "aliens" (compare Fox pe'kîni'sen<sup>wî</sup>, "it is different." "grouse people" is a popular etymology), and the Fox do not associate them with the Ma'cktä'Ag<sup>kî</sup>. Again, an examination of the following passages shows that the Potawatomi and Mascoutens can not be the same: the Relation of 1657-58 of the Jesuit Relations (44:247); the Relation of 1669-70 of the Jesuit Relations (54: 205, 206, 207, 211, 227); Nicolas Perrot, *Mémoire*, pages 222, 223;<sup>14</sup> The Journeys of René Robert Cavelier La Salle (I:99, 102),<sup>15</sup> Hennepin, *A New Discovery*, etc., pages 119, 143, 632, 634;<sup>16</sup> Lahontan, *New Voyage to North America*<sup>17</sup> (I:231, where the Maskoutens and Pouteouatemis are both mentioned on the same page; see also the map after the table of contents); Bacqueville de la Potherie, *Histoire de l'Amérique Septentrionale*<sup>18</sup> (II: 125, where we read "les Outagamis, les Miamis, les Maskoutechs, les Kikabons, & les Isliinois. Les Pouteouatemis. . ." IV: 206, where will be found "Les Puans, les Outagamis, les Maskoutechs, les Malhominis ou Folles avoines, les Amikois & les Pouteouatemis," see also further on; see also II, 98, etc.) The information given by Thos. Jefferson on the aborigines of this

<sup>12</sup> Shea, ed., III: 183 (New York), 1868.

<sup>13</sup> See Tanner, *Narrative of captivity and adventures*, etc., p. 315 (Madison, Wis.), 1830; Black-Bird, *History of the Ottawa and Chippewa Indians of Michigan*, p. 94 (Ypsilanti, Mich.), 1887.

<sup>14</sup> *Apud* Blair, *loc. cit.*, I (The *Mémoire* was written 1680-1718.)

<sup>15</sup> Cox, ed. (New York), 1905.

<sup>16</sup> Thwaites, ed. (Chicago), 1903 (reprinted from the London edition of 1698).

<sup>17</sup> London, 1703.

<sup>18</sup> Paris, 1722. As Miss Blair's book, cited above, is more accessible, I cite some references to La Potherie there: I 301, 317, 344, II. 20.



country in his "Notes on the State of Virginia"<sup>19</sup> can be utilized with a little caution: see pages 144, 145, 146, 147. Some old maps are also useful (cf. above).

The term "Prairie Potawatomi" seems to be late. The following is from Chittenden and Richardson's edition of De Smet's Life, Letters, and Travels:<sup>20</sup>

The Potawatomi are divided into two tribes, those of the forests, among whom are a good number of Catholics, and those of the prairies, who never had priests among them. These last form a mixed nation, composed of Potawatomi, Winnebagoes, Foxes, Chippewas, Sawks, Ottawas, Menominees, and Kickapoos; there are more than 3000 of them. They separated from their brothers of the forests at the beginning of the war for the independence of the United States. [The letter is dated January 10, 1847.]

The Report of the Commissioner of Indian Affairs for 1843 (pp. 398-99) contains the following, which is of interest in view of the preceding: "Although these Indians were originally of different tribes, yet no distinction is now recognized or observed among them. They all describe themselves as 'Pottawatemies,' by which name they are also known among the neighboring Indians." If we read the Report of the Commissioner for 1845 we learn that Potawatomi of the prairie was only one band of the Potawatomi who went westward (see page 555 where the Saint Joseph band and Potawatomi of the Wabash are also mentioned). Since other western Potawatomi are mentioned (p. 546 *et seq.*), other bands are implied. These data seem to fall in line partly with what Skinner has already said. Later the term "Prairie Potawatomi" (and variations of this) seems to have been used in derogatory sense and applied to the conservative band.<sup>21</sup> Later the term was used for those who remained in Kansas. In this connection I may state that the Kickapoo term for "Potawatomi" in general is Pă'kitcig<sup>ki</sup>, a participle in formation; the designation of the Citizen Potawatomi in Oklahoma is Cî'cîpineniy'agi, "Duck Men" (the Fox also know them by a phonetic equivalent); that of the Prairie Potawatomi now in Kansas is Ma'ckutanenî'agi, "Prairie Men"; that of those Potawatomi now in Wisconsin Ke'sanianenî'agi (meaning ?). How old these names are I do not know. But since the ancient home of the Potawatomi, as is known, was in the lower Michigan peninsula which was virgin forest in aboriginal America, a designation of them as the equivalent of

<sup>19</sup> Cited according to the Boston edition of 1802

<sup>20</sup> Page 1087 (New York), 1905.

<sup>21</sup> See the Reports of the Commissioner of Indian Affairs for 1859: 149; for 1861: 12; for 1869: 357, 358, 373, and De Smet, *op. cit.* 931.

"Prairie People" and the like could hardly be considered old, even if we did not have De Smet's explicit statement (see above). And the army officer who in 1812 gave an estimate of the warriors of the Piankeshaws, Ouiatanos, Kickapoos and Musquitans, also gave the number of those of the Putawatimies as five hundred. Other censuses tell the same story. What I have said above is simply confirmed.

Whether or not Potawatomi is derived from Potawatamiñk and means "People of the place of the fire,"<sup>22</sup> no doubt it would be associated popularly with it (cf. Ojibwa *bōdawa*, kindle a fire), and the Huron *Ndato8atendi* (and variants; *vide supra*) implies it. The similarity of meaning with the Huron *Assista Ectaeronnon*s, *ya tsistaeronnon*, *Asistagueroūon* (and variants) which means Mascoutens as we have seen above, might lead one to consider them as the same people were it not for the facts outlined above. And this is not the only case where distinct Indian tribes have the same or similar names: witness Gros Ventres (Algonquian and Siouan), Blackfeet (Algonquian and Siouan), Muscagoes (Swampy Crees) and Muskogees (Creeks), *MA'ckutāneni'Agī* (Kickapoo name for the Prairie Potawatomi now in Kansas), *MASKutēwiyiniwag* (Cree for "prairie men"), etc.

It is well known (and can be easily verified) that the Mascoutens were constantly associated with the Kickapoo. This has led some to believe that they were either the same people or that the difference between them was only nominal at best.<sup>23</sup> I suppose this also rests partly on the alleged linguistic unity. But the statements of early writers on such matters can not be taken very seriously in view of the enormous linguistic similarity of all Central Algonquian tribes. Years ago I established that Peoria, Miami, etc., belong linguistically with the Ojibwa, Ottawa, and Potawatomi group, not with the Sauk, Fox, and Kickapoo one. Lest it now be inferred that the Prairie Potawatomi band now associated with the Kickapoo of Kansas (not the independent Prairie Potawatomi of Kansas) are indeed the survivors of the Mascoutens, I hasten to add that these joined the Kickapoo to worship with *Kanakuk*.<sup>24</sup> In view of what has been said, the statement in the article *Mascoutens*<sup>25</sup> ("the northern group having probably been absorbed by the Sauk and Fox confederacy, and the southern group by the Kickapoo") seems to lack any substantial foundation.

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<sup>22</sup> Bottineau in the article *Potawatomi* in part 2 of the Handbook of American Indians: there are some linguistic considerations against it.

<sup>23</sup> See Beckwith, *The Illinois and Indiana Indians*, p. 117 (Chicago), 1884.

<sup>24</sup> See the Report of the Commissioner of Indian Affairs for 1859. 144, 145

<sup>25</sup> BAE-B 30, pt. 1 812.

McKenney and Hall, *History of Indian Tribes of North America*, etc.,<sup>26</sup> have more or less cribbed their information from Forsyth (somewhat as I have previously shown on another occasion), and so their statement has no value as independent testimony. Their own opinion (that the Mascouten are a branch of the Potawatomi) will be found on pp. 115, 116, of vol. III (1850).

Shea's suggestion that Mascoutens is a corruption of Me'ckwa'ki'ag<sup>h</sup> (in my transcription) is linguistically impossible. I have the impression that it has been suggested that Rasaoua-koueton is a corruption of Mascouten, but can not locate this. In any case it is only too transparent that Rasaoua-koueton is a corruption of Nassauaketon, "Nation of the Fork" (a band of Ottawa) as given in the *Handbook of American Indians*.

W. D. Strong's *The Indian Tribes of the Chicago Region* (Chicago, 1926) is admittedly based on secondary sources (barring the excerpts from the De Gannes's MS.), and hence I have made no references to it. P. Lawson's *The Potawatomi*<sup>27</sup> contains a number of references and statements which support the contention that the Mascoutens and Potawatomi can not have been the same. A word on Lucien Carr's article on the Mascoutins.<sup>28</sup> I do not feel called upon to deal with this seriatim because the article obviously was considered when the *Handbook* was prepared. I will simply state that his whole argument collapses in view of the fact that Ontwaganha (and variants) means "one who utters unintelligible speech" and hence "alien," and was applied to various tribes, as properly pointed out by Hewitt;<sup>29</sup> and again when the *Relation of 1648-49*<sup>30</sup> reads (in the English translation), "the Ouchaouanag, who form part of the Nation of Fire; the Ondatoatandy and the Ouinipegong who are part of the Nation of the Puants," confidence in our authority wanes; for the Ouinipegong are the Nation of Puants (Winnebago) as any well-informed ethnologist knows. And Ouchaouanag may easily mean only "southerners" not "Shawnee." Knowledge of the geographical locations of the Shawnee and the Mascoutens in later times preclude the possibility of their being identical, besides other points mentioned above. That these were tribes known by hearsay, not personally, must be our verdict.

<sup>26</sup> Vol. II: 11 (Philadelphia), 1849.

<sup>27</sup> *Wisconsin Archaeologist* XIX: 41-116 (Milwaukee), 1920.

<sup>28</sup> *Proceedings, American Antiquarian Society*, April 1900, pp. 448-62 (Worcester, Mass.), 1901.

<sup>29</sup> See also Thwaites, ed., *Jesuit Relations* 61: 249 (Cleveland), 1900.

<sup>30</sup> *Jesuit Relations* 33: 151 (Cleveland), 1898.

R. P. J. Tailhan in his edition of Perrot's *Mémoire* (Paris, 1864, pp. 221, 277: a condensed statement is in footnote 122 of pp. 154, 155 of Vol. I of Blair's book cited above) classifies the Mascoutens with the Illinois group as he also does the Kickapoo. Looking up the references in the Jesuit Relations I find that these do not always say precisely what is at least implied. I have dealt above with the linguistic situation. Tailhan's notes apparently were not consulted by the authors of the article *Macoutens*.

In conclusion let me again call attention to Miss Blair's meritorious note; and let me express the hope that the present lengthy paper is not superfluous.

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## THE ALLEGED LACK OF MENTAL DISEASES AMONG PRIMITIVE GROUPS

By ELLEN WINSTON

OPINION is widespread among students of society that the conditions of modern life are conducive to the development of mental disorders. General statements are often made to the effect that nervous diseases are a necessary accompaniment of complex civilization. On the other hand primitive groups are alleged to be remarkably free from such pathological manifestations. Their supposed condition is contrasted with the large number of individuals in hospitals for mental disease in the United States and most European countries. The explanation is often made in terms of man's inability to adjust to the demands of complex civilization. The functional psychoses are particularly emphasized as indicative of this maladjustment. In support of the thesis that the prevalence of mental disease is indicative of inability to adjust, reference is made by sociologists and anthropologists as well as by laymen to the lack of such manifestations among peoples of simpler cultures.

There are several indirect methods by which it is possible to examine this generally accepted tenet to the effect that the simpler peoples are relatively free from nervous and mental disorders. In the first place comments are frequently made in the literature in the field concerning various types of pathological behavior. When it is taken into consideration that the observers are not trained in psychiatry and presumably are not primarily interested in atypical cases of this sort, the fact that the references are so frequent indicates that there is at least a certain amount of mental disorder.

In addition to the accounts of the pathological behavior of medicine men, mediums, possession, and the like, there are direct accounts of insanity or "lunacy," to utilize the terms of the observers. Weeks describes the treatment of the insane by the Bakongo rather fully, pointing out that "a warning is sent to the family of the insane person to tell them to guard him more carefully, and if the family fail to do so the insane can be killed by anyone whose life he threatens."<sup>1</sup> "Nervous diseases are peculiarly feared by natives," according to Junod who cites the treatment of different types of cases in considerable detail.<sup>2</sup> Schweinfurth, one of the earliest writers to discuss the subject, reports that "the insane (*bindahko*) are shackled

<sup>1</sup> John H. Weeks, *Among the Primitive Bakongo* (London), 1914, pp. 64, 214, 227

<sup>2</sup> Henri A. Junod, *The Life of a South African Tribe: II The Psychic Life* (Neuchâtel, Switzerland), 1913.

hand and foot. . ."<sup>3</sup> Further evidence of the fact that mental disorders are sufficiently common to have well worked out procedures of treatment is given by Smith and Dale who, after recording that "lunatics are tied up to prevent them injuring themselves or others," describe the medicinal treatment.<sup>4</sup>

Among the Baganda, according to Roscoe, "When a man lost his reason, which sometimes happened, and he became dangerous to the community, his relations put him in the stocks and kept him under restraint. They were afraid to do more than restrain him, so they gave him food and shelter, but left him so confined that he did not live long."<sup>5</sup> Roscoe likewise describes the treatment afforded the insane by the Bakitara<sup>6</sup> and Banyankole.<sup>7</sup>

W. H. R. Rivers in *The History of Melanesian Society* refers rather casually to the fact that "The wife of Paemarinua is a lunatic and unable to look after her house. . . ."<sup>8</sup> In the *Sorcerers of Dobu*,<sup>9</sup> we are told that "Towards insane persons. . . public opinion is most lenient. Or at least there is no machinery for dealing with such persons, and they are well treated."<sup>10</sup> Two specific cases of abnormality are cited, in addition to a discussion of men who run amuck.

These statements are sufficiently detailed with regard to the status and treatment of the more seriously disordered individuals to indicate that such abnormal cases, quite distinct from the hysterical manifestations of religious and magical rites, are frequent enough to have resulted in many cases in definite behavior patterns. This is true in spite of the fact that primitive groups tend to be small and that a relatively large group is necessary before even one case of mental disease is to be expected. Taking this factor of population aggregates into account, the references to mental disorders in anthropological literature give the impression, for it can be nothing more definite at the present time, that psychoses are by no means uncommon in primitive life.<sup>11</sup>

<sup>3</sup> Georg Schweinfurth, *The Heart of Africa*, II: 310 (New York), 1874.

<sup>4</sup> Edwin W. Smith and Andrew M. Dale, *The Ila-Speaking Peoples of Northern Rhodesia*, I 239 (London), 1920.

<sup>5</sup> John Roscoe, *The Baganda* (London), 1911, p. 22.

<sup>6</sup> *The Bakitara or Banyoro* (Cambridge), 1923, p. 290.

<sup>7</sup> *The Banyankole* (Cambridge), 1923, p. 117.

<sup>8</sup> I: 345 (Cambridge), 1914.

<sup>9</sup> R. F. Fortune, *Sorcerers of Dobu* (New York), 1932.

<sup>10</sup> Page 53.

<sup>11</sup> American Indian data have been omitted from the discussion due to the many factors associated with long time contacts with the white race.

A more direct analysis of mental disease in primitive societies is made possible through the study of the specific data supplied by Margaret Mead in *Coming of Age in Samoa*.<sup>12</sup> Dr Mead lists all cases of the mentally defective and mentally diseased coming under her observation as well as cases reported to her.<sup>13</sup>

Omitting the mental defectives the cases of observable mental disorder at the time of her residence in the Manu'a archipelago, with its population of little more than two thousand people, included

- One boy of fourteen, both feeble-minded and insane (catatonic dementia praecox).
- One man of thirty with a systematised delusion of grandeur.
- One woman of thirty or so, definite neurasthenic constitution.
- One girl of nineteen, definite neurasthenic constitution.
- One girl of fourteen or fifteen with a bad tic in the right side of her face (hysterical).

From Tutuila, another island, there were reported to her accounts of four cases "which sounded like the manic stage of manic depressive insanity." In addition several women were observed who had obsessions with regard to operations

Considering the five rather definite cases<sup>14</sup> for Manu'a in terms of a population but little in excess of two thousand individuals, we arrive at a rate of mental disorder of between 225 and 250 per 100,000 population. Omitting the two neurasthenic and one hysterical cases, the rate becomes 100 per 100,000 population. Comparing this with the United States, we find that in 1923, the last year in which a complete census was taken of all patients with mental disease in both public and private hospitals, 245 patients per 100,000 population were enumerated.<sup>15</sup> This comparison is probably not as sound as it would be were we to make the basis of comparison with Manu'a the rural population<sup>16</sup> of the United States with its smaller population aggregates. Data for the total hospital population by previous environment are not available for the United States as a whole.

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<sup>12</sup> Appendix IV: 278-81 (New York), 1928.

<sup>13</sup> There is of course the possibility that not all cases were reported. The omission of any case would make considerable difference when dealing with such a small group and would serve to emphasize the point that mental diseases are not uncommon occurrences in primitive life.

<sup>14</sup> The one case listed as a sexual invert is omitted from the list due to the uncertainty as to the distinction between the biological and psychological aspects

<sup>15</sup> Patients in Hospitals for Mental Disease, 1923 (Government Printing Office, Washington)

<sup>16</sup> All persons living in places of less than 2,500 population

but data for first admissions, i. e., those persons entering a hospital for the first time within a given year, are available. Thus in 1922 there were 78.8 first admissions per 100,000 population for urban areas in comparison with 41.1 per 100,000 for rural areas. Applying the ratio of 78.8 to 41.1 to total admissions, it is presumable that the rural rate per 100,000 population is approximately not more than 100 per 100,000 or about the same as that for Manu'a.

The problem of mental disease is closely associated with age, the rate rising rapidly in old age.<sup>17</sup> The population of the United States contains a considerably smaller percentage of children and a larger proportion of old people than does Samoa. This in turn would operate to lower the proportional amount of mental disease in Samoa in comparison with the United States.

#### PERCENTAGE DISTRIBUTION OF POPULATION BY AGE

<i>Age Period</i>	<i>United States</i> <sup>18</sup>		<i>American Samoa</i> <sup>19</sup>
	<i>1930</i>	<i>1920</i>	<i>1920</i>
Under 5 years	9.3	10.9	15.8
5 to 9	10.3	10.8	13.6
10 to 14	9.8	10.1	9.6
15 to 19	9.4	8.9	8.8
20 to 24	8.9	8.8	8.6
25 to 34	15.4	16.2	18.1
35 to 44	14.0	13.4	12.2
45 to 64	17.5	16.2	10.7
65 years and over	5.4	4.7	2.5

According to the protagonists of the theory of increasing mental disease in modern civilization, emphasis should be laid upon the functional psychoses as indicative of the wear and tear of modern life. Yet the cases reported by Mead all fall within the classification of functional disorders. The comparisons in the present paper have been made on the basis of total cases of mental disease although only between sixty-five and seventy per

<sup>17</sup> Rates of first admissions to hospitals for mental disease in the United States during 1922 per 100,000 of the general population for the older age periods were as follows

	<i>Urban</i>	<i>Rural</i>
55 to 59 years	127.7	71.8
60 to 64 "	139.8	82.3
65 to 69 "	170.4	87.5
70 years and over	246.0	137.5

<sup>18</sup> Fifteenth Census of the United States 1930, II 566

<sup>19</sup> Census of American Samoa, 1920, Bulletin of U. S. Department of Commerce



cent of the total patients in hospitals for mental disease in the United States on January 1, 1923 were diagnosed as functional cases.<sup>20</sup> This leads us to question whether the functional psychoses can be regarded as an index of the demands of civilization when all of the cases reported by Mead for both islands seem to fall within this category.

The data are admittedly slight. Nevertheless, they are sufficient to raise the issue as to whether the simpler peoples are actually free from mental disorders and whether there is an excessive rate of mental disease in complex cultures. Taking into consideration the frequent references to pathological conditions in the literature, the younger age distribution of primitive groups, and Mead's data *for functional disorders*, it seems evident that mental maladjustments are not uncommon in primitive life. Thus, the general assumption of the rate of mental disease as a marked symptom of the stress and strain of modern life is thrown into question. The problem can of course be conclusively answered only by the accumulation of additional data of the type analyzed here.

RALEIGH, NORTH CAROLINA

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<sup>20</sup> For the possible effect of alcohol and syphilis, important causes of mental disease in the United States, see the general discussion of these two problems by G. H. Lane-Fox Pitt-Rivers, *The Clash of Culture and the Contact of Races* (London), 1927, pp. 69, 73-74.

IN OCTOBER 1930 the writer had an opportunity to examine the Inca ruins at Cuzco during an all too brief visit to that historic city. One or two features of the ancient stone work which were noticed at that time seem worth recording.

It has often been pointed out that the workmanship in Inca masonry is of a superb nature with joints so perfect as not to permit the penetration of a penknife. It is a further matter of note that each stone is so formed that it can occupy one and only one position in the walls, and that no mortar was used in the construction. It is the purpose of this paper to explain the first two points and show that mortar is unnecessary.

Let us study Plate 5, A. This is the famous "stone with twelve corners," which is so often cited as an example of the careful forethought used in planning a wall so that each stone fits a certain niche. On a casual inspection of this stone it occurred to the writer that the stones were not quarried to these weird shapes, but were quarried roughly and then ground to their final shape *in situ*. The photos seem to prove this assumption.

In 5, A we may assume the lowest layer to be in place. The mason then lays the rough stone, No. 1, on the wall and his helpers proceed to fit it by pulling it back and forth at right angles to the face of the wall until its left hand and bottom surfaces fit perfectly against those of their neighbors. Large twelve-cornered stone, No. 2, was next in place. The curvature of the joint, 1-2, and the rounded corners indicate grinding *in situ*. Third in place was No. 3, again with a curved joint. Numbers 4, 5, 6, 7, 8, 9, were put on in order, each being perfectly fitted before the next was started. Notice how No. 4 was worked in as a wedge under its own weight. The rounded corners and curved sides are a natural result of grinding. Corners 4-5-6, 2-7-8, and 2-8-9 are especially interesting in this respect.

It is at once obvious that joints so made could easily reach a perfection such that the penetration of a knife would be difficult or impossible, and especially so if the fine sand and powder caused by the grinding were permitted to remain in the joints, which seems to have happened in some cases.

Plate 5, B shows a wall of somewhat better grade; at least there is more attention to detail. Here there is ample material for checking the assumption that stones were fitted *in situ*. Without going into detail it will be sufficient to call attention to certain stones and joints. Anyone with sufficient interest can work out the approximate order in which the stones were placed. Notice is directed to corner 1-2-3, base of No. 4, corner 5-6-7,

upper surface of No. 8, lower surface of No. 9, and many others. The stone above joint 1-2 is especially interesting. It is to be surmised that the quarrying was done with greater care in this case since the elements of the wall of Plate 5, B are much more nearly rectangular.

In Plates 5, C and 6, A are shown two examples of walls with smooth surfaces, the stones having the outer ends flush. It is said that the wall of the Temple of the Sun is seven to nine feet thick. Its outer sides have a pronounced slope and curved contours. Fitting by rubbing is again in evidence, but even more striking is the smooth curved surface. The quarrying here represents an advanced stage, stones being approximately fitted before being placed in the wall. The surface was probably smoothed and rounded by the application of abrasive stones to the wall after blocks were fitted in place. The sloping wall would facilitate this and might, in part, be an outcome of the method.

Plate 6, A is an inner wall in the Temple of the Sun showing a still more advanced quarrying. The final fitting was done in the usual way, however.

There are one or two exterior walls in Cuzco showing a refinement greater than the Temple of the Sun. In these are found joints which are horizontal and vertical to a close approximation. In these there is evidence that a great deal of thought was given to the final appearance. Quarrying was done very carefully. Walls seem to have been built up one complete tier at a time. Individual stones were worked in as before, but owing to superior quarrying methods, the wear at corners seldom amounts to an eighth of an inch, there being only enough to show the method still in use. As a tier was finished it is probable that its entire upper surface was ground flat and horizontal with large stones dragged or pushed along the top. Thus successive tiers always started from a smooth level surface, making horizontal, continuous joints. Care was taken to finish the surface of each stone, but not the entire wall as a unit, as in the case of the Temple of the Sun. The blankness of the wall is relieved by making each stone slightly convex, and this also could be done by grinding *in situ*. (See Plate 6, B.)

There is much to show that the masons expected to handle these stones a great deal. Plate 6, C shows large stones with projections which may have been larger at the time of building. These were evidently for the use of slings and possibly to facilitate the movement in grinding. Similar knobs appear in Plate 5, A.

Any worker with optical glass knows that in grinding one surface on another the upper one becomes concave and the lower convex. It would undoubtedly come about in the making of walls by the above process that



A



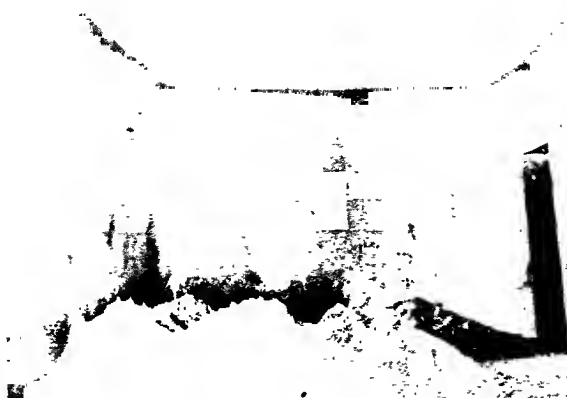
*H. H. Hensell, Photographer, Arequipa, Peru*

B



C

Inca masonry at Cuzco.



A



B



C

Inca masonry at Cuzco

the bottom surfaces of stones would become slightly concave and the upper surfaces convex to fit. This would produce a slight interlocking effect which would add greatly to the permanence and stability of a structure. In certain cases (eg., No. 4, Plate 5, A) the lateral surfaces might also partake of this curvature, and additional strength result. The writer has not seen an example of such curvature in the walls. It would be of great interest to examine the inner surfaces of some of the stones to verify this hypothesis.

A progressive improvement in the construction and especially in the quarrying is noticeable. This follows naturally as one generation builds on the experience of another, and the number of skilled grinders increases, so that some are transferred to quarrying. Quarrying is thus seen to change from an unskilled or semi-skilled labor to a task for skilled and experienced workmen.

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## CULTURE GROUPS OF THE TARDENOISIAN IN CENTRAL EUROPE\*

By LOTHAR F. ZOTZ

OF ALL the mesolithic cultures the European Capsian or Tardenoisian<sup>1</sup> has been especially well explored during the last years, which, owing to the wide extension of this stage, was inevitable. However, a subdivision into lower (inferior), upper (superior), and late Tardenoisian has been made for some time, but the particular facies of this stage, so uniquely uniform, have only been brought out very briefly. Here chiefly the Polish prehistoric researches (among the most deserving representatives of which I mention only Kosłowski, Sawacki, Jazdzewski, Bryk, and Szmit) have gained a lasting merit for their exploration of the miolithic period. However, no less important for the judgment of central European mesolithic times are the numerous Russian publications, among which Rudynski's works take the first place. When Obermaier, relying upon the two lower (inferior) palaeolithic culture centers in Spain-France and in the territory of the former Danube monarchy, speaks of a western and a Danubian culture center of the Tardenoisian,<sup>2</sup> he has given direction to further researches. To these two palaeolithic centers was added a third: the eastern center. It is well known that the individuality of its culture is more accentuated than the peculiarities of the two well known centers, when they are compared with each other. Therefore it is theoretically obvious, that a reminiscence of the forms belonging to the Polish palaeolithic period ought of necessity to show again in the mesolithic period of this country. We should then be entitled to speak not only of two but of three culture centers of the European Capsian or Tardenoisian, the more so since up to our time cultures of the Danubian center have not yet been separated clearly and in detail from those of the western center.

But more important still than these considerations is the fact that we have succeeded, merely on the basis of the excavated material, in showing a continuity of the Swiderian<sup>†</sup> into the eastern German Tardenoisian and thus proving an East German-Polish culture center.<sup>3</sup> The Swiderian of

\* Thanks are due Dr George Grant MacCurdy for having gone over the author's English translation. The editor has taken it on himself to smoothe the English text and assumes full responsibility for any errors which may have resulted.

<sup>1</sup> O. Menghin, *Weltgeschichte der Steinzeit*, 185 (Vienna), 1931.

<sup>2</sup> H. Obermaier, *Tardenoisien*, *Libert Reallexikon* 13: 178.

<sup>†</sup> The Swiderian was a sand dune era — G. G. Mac C.

<sup>3</sup> L. Zötz, *Das Tardenoisien in Niederschlesien*, *Altshlesien* III, no. 2-3, 1931. We should, however, prefer to speak here and always of an Ukrainian-Polish culture center instead of an East German-Polish one.

Poland corresponds temporally with the western superior Magdalenian or lower (inferior) Azilian and is taken by Rudynski for an epipalaeolithic culture.<sup>3</sup> Similarly, now as the western lower (inferior) and upper (superior) Tardenoisians lose their pure Tardenoisian character by a more or less accentuated Magdalenian tradition and become an Aulno-Tardenoisian, there grows from the Ukrainian-Polish center a Swiderio-Tardenoisian, which there takes the place of the Tardenoisian nearly in its entirety (see table 1). The Swiderio-Tardenoisian shows however, according to the site, a greater, though individually rather different complexity than its parallel stage in the west, which is comprehensible from the extension of the area it occupied. This, however, ought not prevent us from seeing the essential associations. The levelling of all the Tardenoisian cultures to a nearly completely uniform European group has evidently happened only in the latest 'Tardenoisian' this we partly have to speak of as an opsimesolithic culture (see Menghin). But even here we can still recognize Swidry reminiscences in eastern Europe.

It is the great merit of Schwantes' to have pointed out for the first time the relations of the northwest German flint-culture to the eastern mesolithic period. If on another occasion I turned against Schwantes' I shall in the subject ventilated here only the more willingly lean on him. I have treated the character of the Swiderio-Tardenoisian in a few lines in my work on the Silesian Tardenoisian. The origin and formation of this mesolithic group will, however, only become comprehensible by a consideration of its autochthonous territory in Poland and on the Dnieper and the Donez. Therefore it will be necessary, in order to extend my statements, to rely on the very clear exposition of the prematurely deceased Polish scholar Szmitz<sup>4</sup> and the valuable publications of material by the Kiev School.

An upper palaeolithic or lower epipalaeolithic period, a culture of which the Tardenoisian infusion is yet scarcely perceptible, seems to present

<sup>3</sup> M. Rudynski, Le mouvement scientifique dans le domaine du paléolithique et du mésolithique en Russie pendant la révolution. *Annuaire du laboratoire d'Archéologie*, 6. Tr. Voz'de l'Académie des sciences de l'Ukraine IV. 1930 (Kiev, 1931) on the 50<sup>th</sup> anniversary of the 1<sup>st</sup> (abbreviated as "Annuaire Kiev").

<sup>4</sup> G. Schwantes, *Nordisches Paläolithikum und Mesolithikum*. Halle, 1928 (reprints 1928).

<sup>5</sup> *Fiszen und Urgeschichte* VI. 1930.

<sup>6</sup> Z. Szmitz, *Badania osadnictwa i etnologicznego*, 1. *Prace* (Warsaw), 1929. *Współczesna* 1929.





itself in Mielnik. Szmit has avoided it to analyze chronologically this stage with exactness. He only referred to its association with the Aurignacian, from which many eastern mesolithic cultures, skipping the Magdalenian-Solutrean stage, seem to have started. Would not the round-scraper, developed from the keel- and high-scraper, occur in the eastern Aurignacian? If so one might see in this tool-type the beginning of the Tardenoisian influence. This becomes more evident in the homogeneous culture of Stankowicze, which corresponds with the Pludy stage.<sup>8</sup> Here Szmit concludes a Tardenoisian analogy and not alone from the carefully worked "pointes à soie." He also points out the difference in the size of the instruments, which become smaller in comparison with Mielnik. A large percentage of the instruments of Stankowicze might as well belong to the Magdalenian, while the epipalaeolithic character of certain chisels, of most of the scrapers, and of a great number of the small points, seems to be out of question. It is probable that in Podlasien the Tardenoisian industry already existed beside the industry of the type of Stankowicze; for in several of the sites there appear degenerated forms of helved points and scrapers, possibly produced under the influence of the Tardenoisian technic. In the homogeneous stations of Turna Wielka, Zajeczники and many other Polish sites the Tardenoisian elements have become still more predominant. The valuable work of Szmit, richly provided with illustrations, reproduces plainly the range of forms of the Swiderio-Tardenoisian. We therefore confine ourselves to mentioning some of the leading forms: the Tardenois nucleus, partly showing only the negative of the characteristic micro-tools, rough blades with struck off backs (fig. 1:12), blades with straight or slanting end-re-touch. Also gravers are still frequent, unlike the upper Tardenoisian, of which the micro-notching-gravers are typical. We also find gravers of middle size and corner-gravers, but they already show distinct signs of degeneration.

The lower palaeolithic double-scraper still occurs, but variations of more or less short and square scrapers are more typical (fig. 1:8). Certain forms of these (fig. 1:19) show a slanting front edge, which can also be observed in the comparatively rare blade-scrapers of the eastern upper Tardenoisian. The inclination for the microlithic technic becomes evident also in the scrapers (fig. 1:14); they often end in a point at the lower part (fig. 1:14, 19). The real round scraper appears, though not yet predominating. The most beautiful and typical instrument, however, is the Swidry

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<sup>8</sup> For the quotations of Polish literature not mentioned here, I beg to refer to my essay in *Altshlesien III*, 1931

helved point taken from the Swiderian (fig. 1:1-3). A remarkable feature is the notching technic on all possible tools. From this the so-called saws originated. Yet not only on the blades, but also on scrapers, graters, and

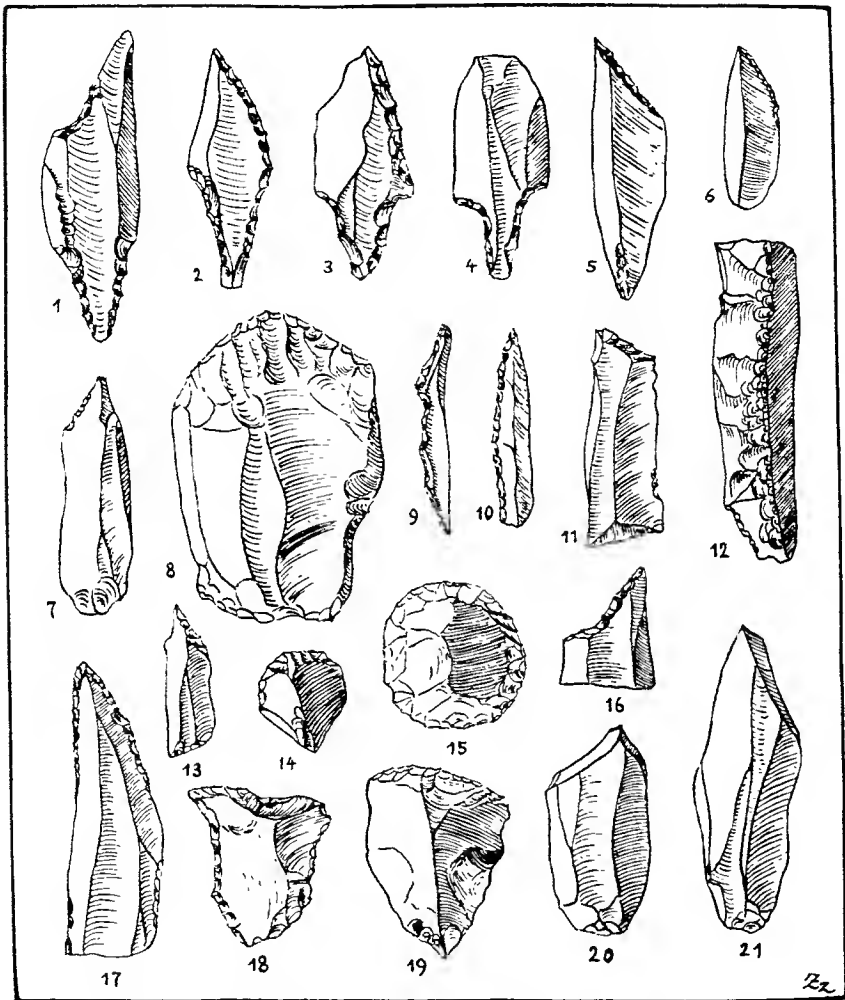


FIG. 1 Lower Tardenoisian of the eastern center from Stankowicze (Poland).  
After Szmit (9-11)

fishhook-points (fig. 1:9) such teeth were worked. I cannot state with certainty, however, whether this sort of indenting technic is of any general significance.

The south Russian stations, which have become known to us especially by the annuals of the Th. Vovk Institute of the Ukrainian Academy of Sciences as well as the Polish dune finds, let us distinctly recognize in the locally wide basis of variation of the different sites<sup>9</sup> an earlier, but generally less microlithic stage and a later, strongly microlithic stage. The latter shows the geometrical Tardenoisian infusion visibly; while the former appears, similar to the Polish stations of Stankowicze and others, more or less accentuated only in different qualities of some utensils. Already toward the end of the palaeolithic period, a station like that of Zuravka<sup>10</sup> shows the distinct inclination for geometrical microlithic. Small knives with blunted backs (illustrated by Rudynski, p. 107:4) and blades with struck-off backs (see Rudynski, pp. 112:7, 113:8) occur at the side of microlithic blades, which by a straight or oblique terminal retouch (Rudynski, p. 145:12, 13) take the shape of rectangles or triangles. The station of Zuravka so carefully excavated by Rudynski, is covered with loess. The poor fauna does not tell us much, and it has therefore not become quite comprehensible why the Russian scholar dates Zuravka<sup>11</sup> so early in the lower Aurignacian in one of his works. From typological points of view a temporal equality with the west European upper Magdalenian or Polish Swiderian would seem to us more correct. Yet one might think of a very early Capsian infusion, which would then also justify the age suggested by Rudynski. As a Russian culture, which answers rather well to the eastern lower Tardenoisian, we might mention Smiatchka xiv (fig. 2).<sup>12</sup> There we find the beautiful long blades, already showing in part the terminal retouch, and a back which has not been removed by a chip but lost its sharpness by a number of little careless blows. There are also numbers of short broad blade-scrapers; gravers of different kinds are not yet as rare as they are in the upper Tardenoisian; and as Szmit does for Stankowicze, thus Rudynski refers to the "pointes à soie" in Smiatchka xiv. Finally the Swidry helved point, which we regarded as especially characteristic of this stage, is not missing here.<sup>13</sup> Station xiv on the Smiatchka, a tributary of the Desna, is in the

<sup>9</sup> This can be accentuated by a choice of illustrated material offered by the different authors, which will be especially necessary for many Russian stations, the tool-forms of which are not illustrated in such profusion as the Polish

<sup>10</sup> M. Rudynski and A. Vorony, A propos de la trouvaille de Jouravka, *Annuaire Kiev* 1 (1927), 1928. Also M. Rudynski, Zuravka, *Kiev III* (1929), 1930

<sup>11</sup> M. Rudynski, *Le mouvement scientifique*, etc

<sup>12</sup> M. Rudynski, *Sur la question du mésolithique en Ukraine* (same publ., 1927)

<sup>13</sup> The Swidry-point must not be mistaken for a similar instrument appearing in nearly all stations together with it and showing a handle of the same technic, while the point is missing

government Tschernigow, which together with the sites in northern Wolhynia, Rudynski refers to his northwestern group, opposing it at the same

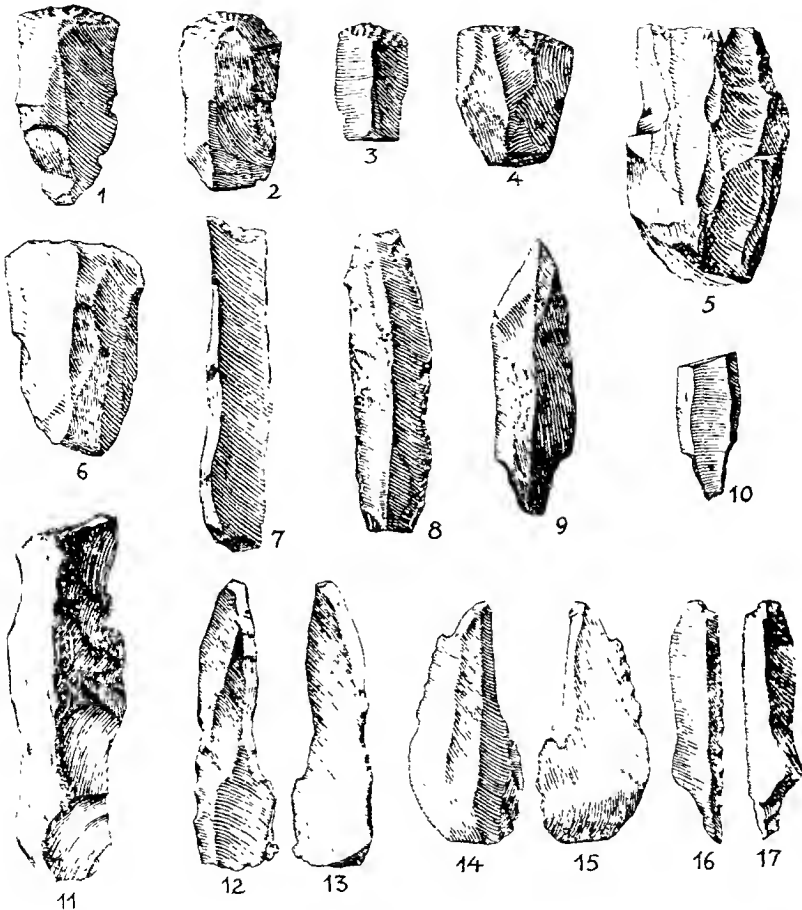


FIG. 2. Lower Tardenoisian (Swiderio-Tardenoisian) from the station Smiatchka XIV (Ukraine). After Rudynski (2-3).

time to a southeastern group in the governments of Charkow and Poltawa (fig. 3).<sup>11</sup> The Russian scholar, in his important and informative work about

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or broken. This instrument is illustrated sometimes with the helve turned upwards and sometimes downwards. This helve is intended to represent the point and the whole must be looked on as a pricking instrument, an awl.

these two sites, writes as follows:

Apparément ces industries sont développées des sources différentes. Au nord-ouest elles se lient avec le maglémosien . . . et le tardenoisien, refracté par le prisme du tardenoisien de Pologne, dans lequel les influences de l'industrie epimagdalénienne locale, désignée comme 'Svidérien' et du maglémosien avoisiné se font sentir.



FIG. 3. Swiderian and Capsian areas in central Europe.

While he does not expressly add Smiatchka xiv to the stations of the neighboring Poland, we regard this station as a typical Swiderio-Tardenoisian one (fig. 2).

To judge from existing publications, the upper Tardenoisian, characterized by the trapezoids, seems to be much more frequent in the Ukraine too. Besides these tools, generally spoken of as cross-cutting arrow-heads, the round-scraper appears. Owing to the nonexistence of any predecessor in the eastern lower Tardenoisian, the geometrical triangles (harpoon teeth) are not often met with in the published Russian material.<sup>14</sup> Beside the

<sup>14</sup> A typical piece we find in figure 2: 11 in O. Tachtay, *Recherches préhistoriques dans le département de Poltawa, Annuaire Kiev II* (1928), 1929.

frequent retouched needle-points, the appearance of such an important leading form as the segmental point is worth mentioning.<sup>15</sup> Among these upper Tardenoisian leading forms of world importance, so to speak, we meet also those forms especially typical of the eastern culture center, like the small retouched notching-scrapers and above all, the manifold variations of the Swidry helved point and the awl related to it. These types of tools, frequently mentioned in the Polish station Stankowice (fig. 1), occur

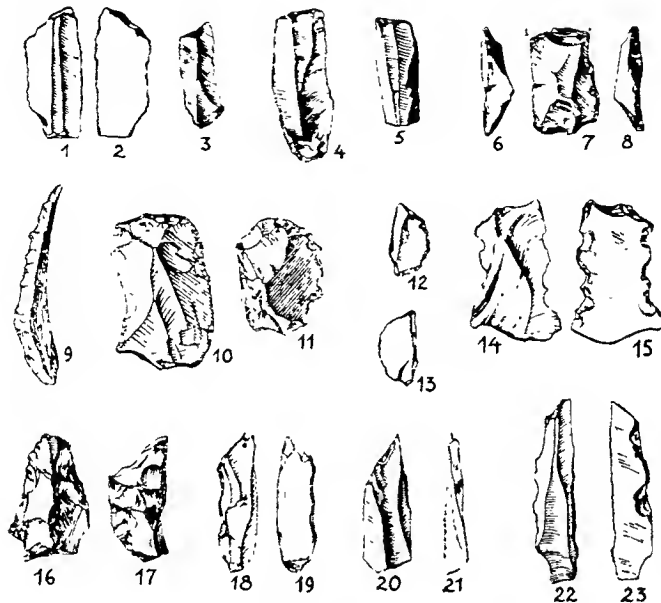


FIG. 4 Finds from Okhtyrka. After Rudynski (1-1)

too in the dunes along the rivers Teterev<sup>16</sup> and Ircha<sup>17</sup> in the north of the government Kiev, as the works of Maria Musket show us. On the Desna, upper Tardenoisian seems to go together with the neolithic period.

The dune finds along the Okhtyrka river in government Charkow (fig. 4)<sup>12</sup> are of special interest relative to the Ukrainian Tardenoisian. They not only distinguish themselves by great diversity, but above all by their ex-

<sup>15</sup> S. Loktuchev, L'industrie microlitique dans le bassin du Donetz moyen, *Annuaire Kiev I* (1927) fig. 46, 1928

<sup>16</sup> M. Musket, Recherches préhistoriques au nord du département de Kiev, *Annuaire Kiev II* (1928), 1929.

<sup>17</sup> M. Musket, Recherches préhistoriques en 1928 (*ibid.*) St. Baran-Butoyev, Les recherches préhistoriques dans le département de Cernihiv (*ibid.*)

treme smallness. Though scrapers with blades are rare, yet we find small round, beaked and keel-scrapers close to micro-shavers. Among the numerous kinds of gravers Rudynski points to the combination of different types of tools in one. Typical trapezoids are missing among the finds of the Okhtyrka, which leads Rudynski to suggest that this station belongs to an earlier phase of the Tardenoisian. We may well follow him in this suggestion. Very possibly we have to deal here with that pure eastern lower Tardenoisian which already existed in the east together with culture groups mostly autochthonous, known as Swiderio-Tardenoisian. Also Szmit for the first time pointed out such a possibility, and concluded from the Tardenoisian infusion in the Stankowicze group the existence of such a culture in Podlasien.<sup>7</sup> Many of the types of the Okhtyrka, though much smaller, remind one of the really classically beautiful upper Tardenoisian of Bila Hora,<sup>18</sup> to which we shall refer again when presenting some remarkable new East German finds.

In this section of the paper it was essential to show that a connection exists between the Russian and Polish culture groups of the lower and upper Tardenoisian stages. We should like to state again that the autochthonous Swiderio-Tardenoisian of the eastern culture center has been proved as well in the northwestern culture area of the Ukraine, though with a yet scarcely noticeable geometrical infusion, and that its forms persist in the upper Tardenoisian of Poland and East Germany as well as of Prussia. Without taking up now Rudynski's far reaching views, we shall return to the German culture area.

In my treatise *Altschlesien*<sup>3</sup> I mentioned "Münchenhofe," distr[ict?] Lebus, as the only German station of the special eastern lower Tardenoisian stage. The site in the dunes of the station of Brustawe in Silesia was at that time not yet known to me. Also the flints found in 1931 on a sandy hill (boulder sand) near Mallmitz in Silesia which, unlike other east German Tardenoisian finds, were patinated, I should prefer to include here. The entire series of forms from that station may not yet have become evident, but it can already be seen from their appearance that they are different from the usual microlithic finds. What strikes us again at once in these few pieces is the pronounced notching technic, from which we probably would not go wrong to conclude the former existence of bone-tools, now wholly decomposed. It is remarkable, that for each single piece from Mallmitz in Silesia a corresponding parallel appears in the Russian station of Bila Hora.<sup>15</sup> Now there are also some excellent geometrical microliths from Bila Hora, so that

<sup>15</sup> M. Rudynsky, La station "Bila Hora" près de Poltawa, *Annuaire Kiev*, 1926. A mixture of microlithic with neolithic fragments is evident



possibly a mixture of upper and lower Tardenoisian has taken place at the Russian station, or else Mallnitz is younger than assumed here. There can be no doubt, in my opinion, that further finds of the Swiderio-Tardenoisian in the east and north of Germany will follow soon. However, I do not wish to anticipate the researches of F. Pfützenreiter,<sup>19</sup> who was able to prove this stage in the Prussian confines of Posen-West Prussia. Andree recently published on a mesolithic culture of the "Hohlen Stein,"<sup>20</sup> which he places between Magdalenian and lower Tardenoisian. Schwantes therefore considers my arguments in "Eiszeit und Urgeschichte" refuted by these discoveries of Andree.<sup>21</sup>

One can see that the flint tools shown by Andree are mainly forms of the lower Tardenoisian (fig. 5). Together with them there occur numerous Magdalenian forms, as Andree specially points out; but compared with other typical lower Tardenoisian stations of the settlement of the "Hohlen Stein" near Callenhardt, this does not give a special note [character?] to it. This station gains increased importance, however, from the numerous tools of bone and by the accompanying fauna, nearly always missing in the open-country stations. This is, as Andree rightly emphasizes, a clearly mixed fauna with the reindeer, cave bear, arctic fox, and white grouse on one side, and the stag and roe on the other. Of special importance, however, is the stone industry, which shows a strong reminiscence of the Magdalenian. From the appearance of helved points of the Swidry type (fig. 5:4-6) one is tempted to join Callenhardt to the eastern lower palaeolithic period, the more so as the blades with struck-off backs would speak for such a view (fig. 5:18). The same is true of the rather large clumsy forms of the scrapers with broad blades (fig. 5:21), which distinguish themselves sharply from the slender narrow forms of the southwest German-Swiss Madeleine culture center. I cannot find among Andree's illustrations any of the characteristic elongated geometrical triangles, which are generally retouched on one side and sometimes even on two narrow corners. In the eastern lower Tardenoisian these points are missing, and if they are really not found in the "Hohlen Stein," it would prove the eastern orientation of this station. A comparison of figures 5 and 1 will make the analogy of the two culture areas in question best recognizable, though in the "Hohlen Stein" the pure western Tardenoisian forms seem to predominate, and possibly even the helved points, though occasionally found here and there in the French and

<sup>19</sup> F. Pfützenreiter, *Die Vorgeschichte des Kreises Fraustadt*, Dissertation (Breslau), 1932.

<sup>20</sup> J. Andree, *Die wichtigsten Ergebnisse neuerer Hohlenforschungen in Westfalen*, *Forschungen und Fortschritte* no. 7, 1931.

<sup>21</sup> G. Schwantes, *Zum Alter des Fundes von Lavenstedt*, *Nachrichtenblatt f. deutsche Vorzeit* no. 2, 1931.

Swiss Magdalenian, might as well be of western origin. To decide these questions clearly is all the more difficult; as, what already struck me years ago, the first Capsian infusion in the western culture center becomes perceptible not only in the Azilian but already in the Magdalenian. Many scholars therefore speak of a continuous evolution from the upper Magda-

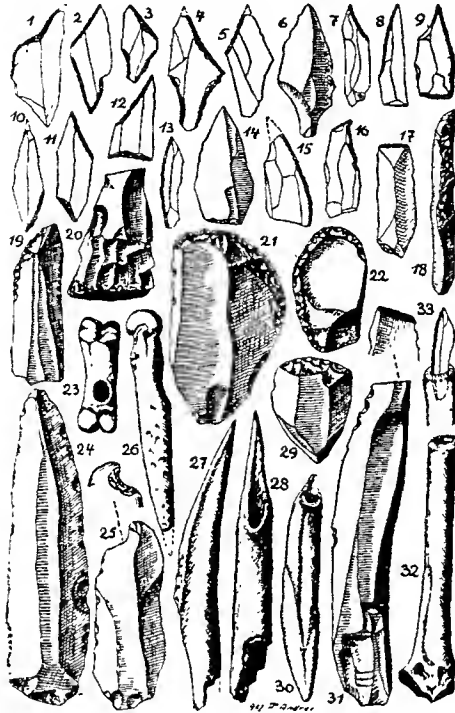


FIG. 5. Lower Tardenoisian from "Hohle Stein." After Andree (1, 2).

lenian to the Azilian and Tardenoisian, especially Sarasin, who contrary to Breuil, had clearly expressed this view in 1918. He had the greater justification for doing so, since at that time the wide distribution of uniform Tardenoisian groups was not yet known. The presence of triangular microliths in the upper Magdalenian of the Birseck cave makes an autochthonous origin of the Tardenoisian in the south German-Swiss district seem very possible or even probable.

The importance of mesolithic cave-stations compared with those of the open country cannot be sufficiently emphasized. For these cave-stations

have preserved in them not only the stone industry but also skeletal remains, and it is always the fauna which remains one of the most reliable criteria of the time scale of culture of those early periods.

A study of the earlier mesolithic cave-finds shows that the fauna of the "Hohlen Stein" falls as little out of the frame of previously known types as does the stone industry. It was Andree<sup>22</sup> again who pointed to the resemblance of the faunas in certain mesolithic cave-stations. His conclusions are identical for the larger part with what will be said in the following section. Nevertheless Andree may go too far in believing himself entitled to read exact temporal evidence from the faunas. The composition of the fauna as a chronological criterium, though not to be denied, ought nevertheless to lean more upon the coexistence of heterogeneous animal societies.

In Andree's researches (which may be considered as reliable, unlike those carried on a few decades ago by Schaaffhausen and Virchow<sup>23</sup> in the Westphalian caves) the proof seems to be given that at that time a mixture of two culture stages, i.e., one Magdalenian and one Azilian, had in reality not taken place. To think of such a mixture of stone industry and fauna was however obvious,<sup>24</sup> because only a pure Magdalenian industry with a pure glacial fauna and a pure Tardenois-Mas d'Azil industry with a pure preglacial fauna was recognized until now. However, it is evident that here also the transitions were fleeting in a cultural as well as a biological sense. The first infusion of geometrical microliths can already be noticed in the late Magdalenian,<sup>25</sup> in the southwest German and Swiss upper Magdalenian stations, it is already distinct and general.<sup>26</sup> Apparently the influence of the Mediterranean culture center of the Capsian makes itself conspicuous here.

The alteration of the fauna, however, can only have taken place gradually because of the slow transformation of the biotypes in the postglacial period. The change of the floral aspect and at the same time of the landscape in the last postglacial epochs of Europe has been brought out more distinctly by pollen analysis. Lately Bertsch has shown<sup>27</sup> that the succession

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<sup>22</sup> T. Andree, Die fruhmesolithische Fauna aus dem "Hohlen Stein" bei Callenhardt, Abhandlung aus dem westfälischen Provinzialmuseum (without date of publication).

<sup>23</sup> H. Schaaffhausen, Über Höhlenfunde in Westfalen, *Correspondenzblatt f. Anthropologie*, 1875, p. 65.

<sup>24</sup> R. R. Schmidt, *Diluviale Vorzeit Deutschlands*, p. 90.

<sup>25</sup> E. Peters, *Die altsteinzeitliche Kulturstätte Petersfels* (Augsburg), 1930.

<sup>26</sup> This especially struck me in the material from the Freudenthaler cave in the National Museum in Zurich.

<sup>27</sup> K. Bertsch, Beitrag zur Waldgeschichte Württembergs, *Jahreshefte des Vereins f. vaterlandische Naturkunde in Württemberg*, 86, Jahrgang 1930.

of trees throughout Wurtemberg is quite uniform; plains and mountains, however, show considerable differences. Especially instructive in this regard was the spread of the pine, starting from the southeast of Europe, while the fir was making its way from the southwest. What could be proved for the floral aspect may be suggested for the fauna too: an extension not at all simultaneous and uniform in all parts of central Europe. We know, for instance, what little change in the year's climatic average is necessary to create radical alterations of the animal and vegetable societies. That such variations, which followed one another in a proportionally short time, caused quick changes of the forest phases, and that evidently vegetation followed the variations of climate rather quickly, Firbas was able to point out to us.<sup>28</sup> It may seem rather surprising that during a glacial period characterized by the constant appearance of the arctic-subarctic *Carex aquatilis*, warmth-loving trees like the lime, elm, fir, and beech could also exist. The researches of Firbas cover strata of the interglacial period before the last one, but they show nevertheless what we may probably assume for the last glacial phase. "Between the beginning of the forest period, pollen-analytically demonstrated, and the zenith of the last glacial period lies the long period in which the northern inland ice retired from its most remote boundary in central Germany to central Sweden."<sup>29</sup> Yet from the researches of earliest history we know many a thing about the flora and fauna of that period which permits certain conclusions as to climate. Not only with respect to geographical situations, but also due to local influences, there existed considerable climatic variations within central Europe. However, they could no longer be made out with the naked eye, if I may say so, in the age of the European culture-steppe [steppe-culture?]. But phytosociological [ecological?] research is about to demonstrate it distinctly. Tuxen, whose researches in this line can be regarded as epoch-making, promises a proof of local successions for prehistoric times also.<sup>30</sup> "As is still the case in our day, the oro- and hydrographical conditions after the melting of the inland ice must have caused a regional differentiation of climatic character," Gross emphasized in an important summarizing es-

<sup>28</sup> F. Firbas and R. Graumann, Über jungdiluviale und alluviale Torflager bei Senftenberg (Niederlausitz), Abhandlung der mathem. phys. Klasse der sächsischen Akademie der Wissenschaften XL, 1928.

<sup>29</sup> K. Rudolph, Grundzüge der nachszenischen Waldgeschichte Mitteleuropas, Beilage zum Botan. Zentralblatt XLVII, part II, 1930.

<sup>30</sup> R. Tuxen, Die Grundlagen der Urlandschaftsforschung, Nachrichten aus Niedersachsens Urgeschichte, no. 5, 59 ff., 1931.

say.<sup>31</sup> Overbeck and Schmitz also speak of a mosaic-like joining of local conditions.<sup>32</sup>

This digression from our real subject was necessary in order to realize that during the period of postglacial climatic revolution the climatically influenced landscapes of the last predominant period, as well as of the one dawning, existed side by side. And only a realization of the prehistoric landscape will help us to understand the manner in which a dependent prehistoric culture developed. To what wrong and prejudiced opinions concerning the earliest history a wrong interpretation of the primeval landscape can lead, is shown by the hypothesis of an "impenetrable postglacial primeval forest," for this demanded an outright hiatus.<sup>33</sup> The landscapes were at all times not only dependent on the climatic provinces, but also on local influences of especially warm or cold, dry or damp localities, and on the relief, the soil, and water. How local conditions are still in our own day biocoenotic factors and result in a disconnected fauna, I have shown in another place.<sup>34</sup> While according to the hiatus theory human settlements seemed to be missing in central Europe between the end of the palaeolithic and the early neolithic period (which means according to de Geer's opinion during the time of the postglacial), we ought, now that epipalaeolithic (Obermaier) or lower miolithic (Monghin) cultures have been found everywhere, to conclude that there was a rather dense population. A tendency already exists to conclude the face of the primeval landscape of that time from such a settlement. As incorrect as such combinations [conclusions?] would certainly be,<sup>35</sup> on the other hand even the numerous stations ought not to induce us to conclude that there was a dense colonization; as we are not dealing here with village-cultures but with hunter- and gatherer-cultures. That, on the other hand, central Europe at the time in question was more densely colonized than perhaps at the end of the glacial period, is equally certain. It would therefore certainly be profitable to put the question again, what natural conditions of vegetation Tardenoisian man met with when he came to central Europe during the postglacial period, and to answer this question clearly according to the results of pollen analysis and our knowledge of vegetation.

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<sup>31</sup> H. Gross, Das Problem der nacheiszeitlichen Klima- und Florenentwicklung in Nord- und Mitteleuropa, Beihefte zum Botan. Zentralblatt XLV II, part II, 1930.

<sup>32</sup> F. Overbeck and H. Schmitz, Zur Geschichte der Moore und Wälder Nordwestdeutschlands. Mitteilungen der Provinzialstelle f. Naturdenkmalpflege, no. 3. 157 (Hannover), 1931.

<sup>33</sup> Compare Tüxen, *op cit*.

<sup>34</sup> Jahrbuch der preussischen geologischen Landesanstalt, 51, 1930.

<sup>35</sup> Tüxen, p. 94.

Upper Magdalenian surely continued up to the beginning of the post-glacial warm period, which, after Blytt-Sernander, is generally called the subarctic or preboreal time. This epoch is characterized by the fundamental succession of birch and fir (with willow subordinated), while in the following, boreal time, which was warmer than to-day, the hazel tree attained its culmination point. Accordingly the phytology speaks of this as a time of hazel groves. In this period, i.e., the beginning and zenith of the ancyclus phase, the center of gravity of the central European Tardenoisian invasion may be laid.<sup>36</sup> An impenetrable primeval forest neither prevented it, nor was it favored by districts free from primeval forests. Light fir and birch forests could as little detain the advance of man as the dominating hazel groves. Only in the plains we have partly to assume alder fen-forest, which is considered hostile to colonization, at the border of the stagnating waters of lazy, widely branched river arms. If therefore a fisher population of the Tardenoisian (as far as we can prove their cultures in the river districts) always lived among the dunes, the reason was not only their economic stage, but in this case it was also the area of dunes free from fen-forest which attracted them.<sup>37</sup>

One of the most important stations, proving the correctness of what was said above, is the "Kuckucksbad."<sup>38</sup> In a pure upper Magdalenian culture-bed, there were found together with animals of the arctic steppe (such as reindeer, wild horse, arctic fox, varying hare, alpine forms like the ibex, chamois, and marmot) such forest animals as the stag and wild cat. With it went a warm flora including willow, elm, maple, hazel and oak. This presents a parallel in the last glacial period to the observations made by Firbas<sup>28</sup> concerning the next earlier glacial period. Importance lies in the fact—and that is what clearly fixes the epoch of the Kuckucksbad colonization as close to the glacial—that 3 arctic foxes, 3 wolves, 36 snow hares, 10 reindeer, 1 wild horse, 1 marmot, 2 ibexes, 1 chamois, 4 ptarmigan, 1 ureneat, only one wild cat, and one stag were recognized among the food remains. Already at the zenith of the Magdalenian the stag makes its appearance. In the Kastlhäng cave<sup>39</sup> the principal game was the reindeer, wild

<sup>36</sup> That at that time considerable shifting of people took place in Europe for the first time, I consider as sufficiently proved by the fact that the Capsian men, whose hunting grounds began to show their present desert character during the European climoptimums, were compelled to emigrate.

<sup>37</sup> Compare W. Czajka, *Die Wandlung der kulturellen Bedeutung einzelner Siedlungs-räume*, *Altchlesische Blätter* 7, no. 1, 1932, and Zotz in *Altchlesien* III: 141, 1931.

<sup>38</sup> P. Z. [*Protohistorische Zeitschrift*?] XIX, 1928.

<sup>39</sup> Fraunholz, H. Obermaier, M. Schlosser, *Die Kastlhanghöhle, eine Rentierstation im bayrischen Altmühltale*, *Beiträge zur Anthropologie und Urgeschichte Bayerns*, 18, 1914.

horse, varying hare, ptarmigan, lemming, glutton, arctic fox, and ibex. "Much more infrequently" the stag was found. At "Petersfels"<sup>25</sup> the forms do not exactly belong to the glacial period: such, e.g., as the stag comprising only 8%, the roe 2%, the wild boar 1%, and the wild cat less than 1%. But contrary to this the reindeer stands with 34%, the wild horse with 11%, and the varying hare with 38%. It is also very interesting to follow the appearance of the two species of foxes at "Petersfels," where 20 arctic foxes stand against 10 common foxes, and at the "Kuckucksbad" 3 arctic foxes against 9 common. No better example could be found to demonstrate a gradual, steady rise of the temperature. This comparison also shows that lists of faunas are of real value to diluvial archaeology only if the proportional quantities of the individuals found are made known along with the different species.

Though it will always be difficult to understand the fossil and subfossil animal societies from local conditions, there is at any rate always a clear connection between the geographic latitude and the fauna. Some northern [nordish] scholars are, as we know, apt "to parallel the reindeer period of Scandinavia with that of France."<sup>40</sup> But that is a typical faunistic paralogism, and Dr Eckholm of Upsala informed me that the Danish moor-finds show sufficiently that the reindeer still existed in the north during the forest period and that therefore the reindeer period of Scandinavia was much later than that of the continent.

Let us now regard the lower Tardenoisian stations. We cannot expect to find that the arctic alpine animal world now suddenly disappears, though we may also expect here a steadily increasing recession in favor of postglacial forest animals. Yet we must not forget that there were some minor tracts of open grass land or undergrowth in some localities of central Europe during the whole postglacial period. The changes of climate were not sudden falls [increments?] but slowly advancing climatic reactions. The succession of the animal world of the palaeolithic period to that of the neolithic period will therefore best be regarded from the point of view of a percentual distribution of glacial and postglacial forms—provided one intends at all to draw temporal conclusions from the fauna.

Let us then consider the few central European cave settlements of the Tardenoisian. As to Martinshöhle, R. R. Schmidt concludes that there was an intermixture. It is remarkable, however, that "some pieces of reindeer horn were lying quite near the surface."<sup>24</sup> Still less doubt can there be about the arctic forms of the Balver cave belonging to the lower Tardenoi-

<sup>40</sup> C. Eckholm, *Utt nordiskandinaviskt palaeolithikum* 2 (ornamn. 1929)

sian culture. This is even more certain since there is no evidence of any Magdalenian in this case at all, but only of Madeleine forms, which, so far as they were found, are posthumous types of the Tardenoisian. Nehring mentions the varying hare and the ptarmigan of the Balver cave<sup>41</sup> and Virchow mentions expressly that he found these bones rather on [near?] the surface in a bed mixed with charcoal. It can therefore only be the question of the Tardenoisian bed, but in other Azilian or lower Tardenoisian culture-beds glacial elements are not at all infrequent. The reindeer appears together with some other arctic animals subordinately in Azilian and Tardenoisian cultures, as the stag and other forest animals appear subordinately in Magdalenian cultures. Birkner mentions the reindeer in the Azilian bed of Kaufertsberg,<sup>42</sup> and according to Rahir<sup>43</sup> the reindeer, wild horse, arctic fox, and ptarmigan appear together with the stag, wild boar, and wild cat in the cave of Remouchamps. A similarly mixed fauna, with reindeer, wild horse, cave bear on the one side and brown bear, fox, badger and wild cat on the other, appears in the lower Tardenoisian of Martinrive.<sup>44</sup> The numerous Bavarian caves which contained Tardenoisian have been visited for decades by thieves.<sup>45</sup> Here there can no longer be thought of faunistic comparisons and the science of primeval history has forever lost its documents. A station of the Geisskirchfelsen objectively explored a few years ago by Gumpert<sup>46</sup> showed with an upper Tardenoisian culture the remains of a forest fauna, the most essential forms of which were the brown bear, stag, roe, common fox, wild boar, beaver, and common hare. In the Luttkammer and under some neighboring shelters of the Südharz<sup>47</sup> the ptarmigan was found everywhere among a similar fauna; which included among others the beaver, common hare, wild cat, lynx, stag, roe, and wild boar. But this bird is still met with here and there in Germany, and even kept for breeding purposes in East Prussia not very long ago.<sup>48</sup> The stations

<sup>41</sup> Verhandlung der Berliner Gesellschaft f. Anthropologie, 1879, p. 12

<sup>42</sup> F. Birkner, *Der Eiszeitmensch in Bayern*, Beiträge zur Anthropologie und Urgeschichte Bayerns, 19, 1915

<sup>43</sup> Rahir, *L'habitat tardenoisien des grottes de Remouchamps, Chaleux et Montaigle*, Bulletin Soc. d'Anthropologie de Bruxelles, 35, 1920

<sup>44</sup> Lohest and others, *La grotte Martinrive*, Revue anthropologique, 32, 1922

<sup>45</sup> K. Hermann, *Mesolithikum in Mittelfranken?* Abhandlungen der naturhistorischen Gesellschaft zu Nürnberg, 24, 1928.

<sup>46</sup> K. Gumpert, *Der Tardenoisienmensch in der frankischen Schweiz als Höhlen- und Abrisbewohner*, Mannus 21, 1929

<sup>47</sup> L. Zotz, *Die vorgeschichtliche Besiedlung des Schulenberges und Steinbergs bei Scharzfeld*, Jahrbuch der preuss. geolog. Landesanstalt 51, 1930

<sup>48</sup> Reichenow, *Kennzeichen der Vogel Deutschlands*, Neudamm 1920, p. 69



of Scharzfeld as well as those of Istein in South Badensia,<sup>49</sup> are less to be ascribed to the Azilio-Tardenoisian than to the upper Tardenoisian. In Istein the fauna, characterized by the stag, roe, beaver, and common hare, presents itself without any infusion of cold-preferring animals. But the late date of this Upper Rhine station does not derive from this fact alone: the arrow heads with several edges denote it as well, provided we do not feel inclined to believe it [the arrow heads?] to be a very early and at the same time strongly marked Capsian infusion. The Azilio-Tardenoisian and the lower Tardenoisian are, it must be admitted, temporally equal [contemporaneous?]; but in southwest German Istein the continuity of the Azilian into the upper Tardenoisian period is shown as distinctly as the continuity of the Swiderian can be proved in the east German upper Tardenoisian.

With these comparative reflections I believe I have shown that even the clearly marked mixed fauna of the "Hohlen Stein" does not demand a temporal position for this station earlier than the lower Tardenoisian.<sup>50</sup> It would therefore be wrong to create a new stage from these finds; all the less since the flint tools are perfectly typical. The appearance of Magdalenian forms, of helved points, narrow blades with struck-off backs, and short scrapers with broad blades, shows that the tradition rather leads back to the eastern Swidry than to the western Mas d'Azil; in other words, that only an offshoot of the Swiderio-Tardenoisian, far advanced to the west, is to be considered. The importance of the new Westphalian finds will doubtless be accentuated by the possibility of arriving at a statement of the age of the Ahrensburg culture by typological comparisons, as Schwantes indicates. The Madeleine age of Ahrensburg, however, cannot be proved by them. Yet I too am of the opinion that in Ahrensburg and possibly also in Lavenstedt (the separation of these two stations seems to me necessary after all) battl[ing]-places [points of contact?] of different periods of the stone age are to be considered. Close to the neolithic fire stone [flint?] beds

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<sup>49</sup> R. Lais. Ein Werkplatz der Azilio-Tardenoisien am Isteiner Klotz, Badische Fundberichte 2, no. 3, 1929

<sup>50</sup> Only after the completion of this presentation I received the important new work of G. Schwantes. Die Bedeutung der ältesten Siedlungsfunde Schleswig-Holsteins für die Weltgeschichte der Steinzeit (Festgabe für Anton Schifferer, 132 ff. Breslau, 1929). Schwantes' view of the temporal position of the cultures of Ahrensburg and the Hohlen Stein differs very little from what I tried to explain here. Yet he maintains the version of the autochthonous character of the European Tardenoisian, while I rather accentuate its utochthonous character from the very geometrical microlithic in the northern cultures. It must be granted, however, that Schwantes has succeeded in bringing forth quite new and plausible explanations for the origin of the microlithic

there is mesolithic material from the flint-turf of Ahrensburg-Stellmoor,<sup>51</sup> the eastern intrusion of which was first pointed out by Schwantes.<sup>52</sup> To this eastern mainstream in the Tardenoisian of Ahrensburg the flints illustrated in Plate XV of *Eiszeit und Urgeschichte*, VII (which I characterized as "questionable mesolithic period") possibly also belong. Also the pure Tardenoisian types illustrated for the first time by Muller-Brauel ought be placed here. If in this view I am of late leaning on Schwantes, it seems necessary for me to point out that just on [that it is because in ?] flint beds a mixture of miolithic and opsimiolithic cultures seem to present itself rather often, and all the more so when [because?] both cultures resemble each other phaseologically. The best example upholding this view is the mixture of east German Polish Tardenoisian with the neolithic north-eastern culture of comb- and dimple-pottery.<sup>53</sup>

On the whole, however, the cultural and also for the most part, the temporal conformity of the microlithic or pygmaic flint industries in central Europe can scarcely be doubted any longer. It was only a few years ago that Burkitt could speak of a sporadic expansion of the Tardenoisian in the west and north of the Alps.<sup>54</sup> A complete culture area, as we can follow it today from Holland, Belgium, through all Germany down to Poland and South Russia, was still unknown to the English scholar. His words of warning that the advantages of the usefulness of tools composed of microliths might have become known in the different continents at different times, had therefore surely this foundation at that time. If, however, exactly the same forms of so-called geometric flints are found in the post-palaeolithic period of Australia, Ceylon, India, South Russia, the Crimea, and Poland, there is a rather strong probability that these districts, far distant from one another, will one day be joined in one immense uniform culture area. To as-

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<sup>51</sup> I owe to the kindness of Dr von Riehtofen, Hamburg, the description and drawings of some flint tools recently found by reliable collectors. To judge from these tools, there are found in Ahrensburg-Stellmoor helved points of the Lyngby type as well as of the Swidry type, which clearly shows a homogeneity easily leading to transitions between the two types. On the other hand there are fundamental typological differences between the eastern and the northern helved points, as I have already pointed out in *Altschlesien*. While the former is often compared with the Font-Robert point, I would rather see a Solutré atavism in the latter.

<sup>52</sup> Especially beautiful helved points, some reminiscent of the Lyngby points and some of the Swidry forms, have been illustrated in a work nearly forgotten, yet so important for the knowledge of the types of forms of the eastern Tardenoisian: J. Przyborowski, *Wycieczki archeologiczne po prawym brzeżu Wisły*, Warszawa, 1874.

<sup>53</sup> B. v. Riehtofen, *Zur Frage der archaologischen Beziehungen zwischen Nordamerika und Nordasien*, *Anthropos* XXVII: 123 ff., 1932.

<sup>54</sup> M. C. Burkitt, *Our Early Ancestors*, 14-20 (Cambridge), 1926.

sume a series of more or less distant autochthonous Tardenoisian centers would seem rather problematical. This, however, does not say anything positively about the temporal equality of the culture areas. In Europe, at any rate, there cannot be any longer a question of a sporadic extension of microlithic industries of mesolithic cave- and dune-dwellers; and the descent of the European Tardenoisian from the African Capsian is, if not incontestable, yet quite probable.

This Tardenoisian culture falls into two large groups in central Europe. These correspond to the advance of this culture by two chief routes, starting, however, from the Capsian area. One route doubtless led from Africa Minor and Spain into the heart of the Magdalenian-Azilian area. And, due to the work of American scholars, the other route is beginning to show its track more and more clearly. This route, in its beginning less trodden, led via Syria<sup>55</sup> and Kurdistan<sup>56</sup> into the countries round the Black Sea,<sup>57</sup> and then along the eastern border of the Carpathians into the heart of the Magdalenian Swiderian area, or rather into the Aurignac-Swiderian area. Another branch led, as Rudynski showed,<sup>58</sup> along the Dnjepr to the Baltic countries.<sup>55</sup> The Russian scholar has thus come to similar conclusions as reported here, and as the Russian literature is not well known, I feel tempted to render these searching results summarily here.

It has been said above that Rudynski distinguishes two culture areas in South Russia (fig. 3) of which the northwestern leans more upon the Swiderian and Maglemosian stages, the southeastern on the Mediterranean field and the Capsian. As a characteristic of the Swiderian group there are mentioned asymmetric "geometrizations," asymmetric trapezes and triangles, and the absence of broad and short regular segments; while contrary to this, asymmetric [symmetric ?] "geometrizations," symmetric trapezes and triangles, regular halfmoons, and so-called parallelograms with a marked back are said to present themselves in the Capsian group.

In the northwestern province there is a special region which does not show any eastern influence of the Tardenoisian and which also remained outside the southern influence. This is in the northern part of the government Tschernigow. This district belongs to the north and joins the area of the Baltic industries, the entire industry

<sup>55</sup> G. Zumoffen, *L'âge de la pierre en Phénécie*, *Anthropos* 3, 1908

<sup>56</sup> D. A. E. Garrod, *The Palaeolithic of southern Kurdistan*, *Bulletin American School of Prehistoric Research*, no. 6, 1930.

<sup>57</sup> C. Mereschowsky, *Recherches préliminaires sur l'âge de la pierre en Crimée*, *Bull. de la société Russe de géographie* XVI, 1880

<sup>58</sup> F. Birkner, *Steinzeitliche Funde aus Litauen*, *Abhandlung der mathem. phys. Klasse der bayrischen Akademie der Wissenschaften*, Supplementary vol. 2: 5 (München) 1923

of these typical stations proving this by the small blades with blunted edge and by the small knives (Rudynski).

For future researches Rudynski wants to draw attention chiefly to the northwestern Caucasus, to the shores of the Black Sea, and to the adjoining terrain of the lower Dnjepr and Dnjestr; being, as he believes, still unexplored as to their epipalaeolithic industries. Yet we ought to succeed in establishing there a connection with the culture areas made accessible during the last years by American scholars on the east coast of the Mediterranean.

The western and eastern routes of Capsian infusion flowing into Europe are shown distinctly in the cultural atavism of the Azilio-Tardenoisian on the one hand and of the Swiderio-Tardenoisian on the other. Whether during these miolithic migrations,<sup>59</sup> caused by the climatic change from the glacial-pluvial period to the geological present, numbers of African-Mediterranean race elements reached Europe together with the African culture elements, cannot be decided yet. The problem has still to be considered more closely by anthropology; yet it seems to me that the numerous pygmy skeletons of the early neolithic cave burials of Switzerland speak in favor of it.<sup>60</sup> The Tardenoisian culture slowly absorbed the old cultures, and especially in the northern and eastern countries, the permanent elements remained predominant for a long time. The representations of figures preserved on little pendants of bone and originating in the Danish moors, for instance, show a clear continuation of the Azilian style known from the painted flints [pebbles ?]<sup>61</sup> A distinct connection of those fenno-Scandinavian [Scandinavian marsh ?] bone cultures with the western Magdalenian-Azilian will surely be brought to light by later finds.

It is after all natural and to be expected, that the Tardenoisian dominance of the different local stages, though generally of the same age, was fluctuating; for which reason we cannot expect a culture already uniformly levelled and locally undifferentiated in the eastern lower Tardenoisian, i. e., the Swiderio-Tardenoisian period. The levelling became complete only in the transitional Tardenoisian, but still in the upper Tardenoisian the pure Tardenoisian infusion was recessive to the absorbed original culture, as for instance, the station of Istein shows. On the whole, however, the

<sup>59</sup> L. Zoltz, *Miolitische Volkerwanderung und Ursprung des Neolithikums*, Volk und Rasse, 243 ff., 1931.

<sup>60</sup> F. Sarasin, *Die steinzeitlichen Stationen des Birstales zwischen Basel und Delsberg* [?] *Neue Denkschriften d. Schweiz. Naturforscher Gesellschaft*, LIV, part 2, 1918.

<sup>61</sup> S. Muller, *Nye stenalders former*, *Arboger*, 1896, 303 ff., especially p. 339, fig. 18-19.

western Azilio-Tardenoisian already appeared much more uniform than the eastern Swiderio-Tardenoisian.

The last question still to be treated is that of the extension of the Swiderio-Tardenoisian and of the homogeneous epipalaeolithic cultures in Europe. The European provinces of influence of the late Capsian and the mixed cultures which arose from the mixture of this geometrical-microlithic blade culture with permanent cultural elements, are provisionally illustrated on a map (fig. 6), wherein the margins, due to the mobility of these

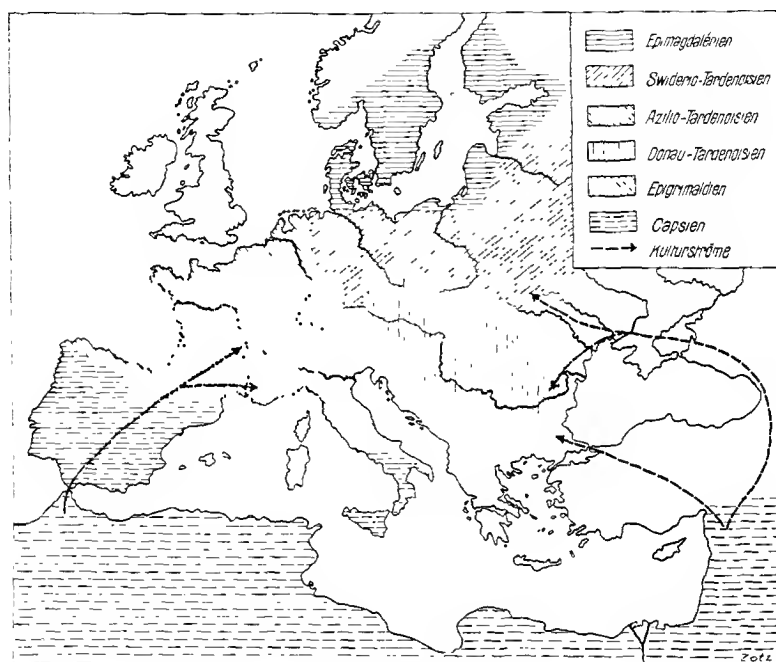


FIG. 6. The Distribution of Swiderio-Tardenoisian and other cultures in Europe.

hunter-gatherer cultures, must be imagined as fluctuating over wide areas. This attempt, not much more than an extension of the fundamental results of Obermaier,<sup>62</sup> can raise even less claim to decisiveness, as the numerous intersections with [of ?] macrolithic cultures were not to be expressed on it. The Campignian, which produced especially numerous mixed cultures, ap-

<sup>62</sup> H. Obermaier, *Das Palaeolithikum und Epipalaeolithikum Spaniens*, *Anthropos* 14/15, 1919-20.

appears later than lower Tardenoisian cultures, but naturally the proto-Campignian has not been seized [absorbed ?] by it. It will strike us, however, that the extension of the Swiderio-Tardenoisian, as far as it can be illustrated cartographically according to our present very incomplete knowledge, corresponds with that of the eastern Aurignacian, and the extension of the Azilio-Tardenoisian with that of the western (French-Swiss-south-west German) Magdalenian, represented in the above mentioned, as it seems, by a posthumous Aurignacian. Nevertheless the western upper Magdalenian does live on in northern and eastern central Europe as an opsimolithic culture, but it is not my intention to discuss this point any further in this place. Obermaier's culture center in Danubian territory has as yet been little studied. The Apennine peninsula seems also to have developed an individual palaeolithic period from the Grimaldian. The routes of entry of the Capsian culture of Africa Minor and Spain have on the whole been fixed. The most surprising feature is perhaps the wide western progress [extension ?] of the Swiderio-Tardenoisian, which, however, can no longer be doubted, and which was evidently followed by a stream of culture directed in the opposite direction during the upper Tardenoisian. On the Main-Rhine-Danube line the two lower Tardenoisian cultures seem to have touched each other. The pure Tardenoisian element was then stronger in the western area than in the much more spacious eastern one, which will also possibly explain the eastward flow of this culture during the upper Tardenoisian.

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WITH the death of Dr Walter Edmund Roth, on April 5, 1933, anthropology loses a worker whose contributions to science have been of an outstanding character. Dr Roth, whose death occurred at Georgetown, British Guiana, after a brief illness, was born in London, England, on April 2, 1861, the third son of Dr Mathias Roth. One of his brothers, Felix N. Roth, was in the British Civil Service in West Africa, and was responsible for the account of the fall of Benin written by H. Ling Roth, another brother, who was an authority on primitive technology and was associated with the Bankfield Museum, Halifax.

As was the case of so many of his generation who became attracted to the study of anthropology, the interest of Dr Roth in the subject grew out of his experiences after his academic training had ended. Receiving his early education in France and Germany, he completed his secondary training in London, finishing his course at the University College School as its first Silver Medalist. He then matriculated at Oxford University, from which he was graduated in 1884 with honors in biology, having been a Demy (Scholar) of Magdalen College. His broadening interests took him into the field of surgery, which he studied in London, being attached to St. Thomas' Hospital where he was Demonstrator in Anatomy for Sir Ray Lankester, eventually becoming a Fellow of the Royal College of Surgeons. Entering the Colonial Service, he proceeded to Australia where he remained until 1906, when he was transferred to British Guiana. While in Australia he filled the posts of Director of the Government School of Mines and Industries of South Australia, Inspector of Pearl-shell and Bêche-de-mer Fisheries, and Surgeon to the Boulia, Cloncurry and Normanton hospitals in North Queensland. He was Protector of the aborigines for Queensland, continuing this work until 1905, when he was appointed Royal Commissioner (singly) to inquire into the condition of the natives in Western Australia. During this period he made the most of his ample opportunities to conduct studies of native life which were later incorporated in his reports on the North Queensland aborigines, publication of one of which called forth from a reviewer the statement that, "Great as is the value of the work done by

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<sup>1</sup> Grateful acknowledgment is made to Mr Vincent Roth of Georgetown, British Guiana, for information used in this paper and for the photograph of his father, and to Mr. J. Graham Cruickshank, also of Georgetown, for a copy of the obituary article on Dr. Roth in the Georgetown Daily Chronicle of April 6th, 1933, and for much supplementary material on Dr. Roth's life and publications

Messrs Spencer and Gillen, that done by Dr Roth is a more than dangerous rival in respect of information on ethnographical questions."<sup>2</sup> As a result of Dr Roth's work as Royal Commissioner, the penal system for the natives was reformed and relief was afforded them from the harshness of earlier procedure. In 1909, after he had gone to British Guiana, he was awarded the Clarke medal of the Royal Society of New South Wales for original researches in natural science.



WALTER E. ROTH

On his arrival in British Guiana in 1906 he was assigned as Stipendiary Magistrate and Medical Officer of the Pomeroon District, and afterwards as Stipendiary Magistrate of the Demerara River District. During the period between 1906 and 1928, when he was retired from the Civil Service, he acquired the material best known to American anthropologists, which is

<sup>2</sup> N. W. Thomas, in *Man*, 5, No. 16: 30, 1905



contained in his studies of the Guiana Indians published by the Bureau of American Ethnology. While Magistrate he led three expeditions, the first to the heads of the Barima and Barama rivers, the second to Mt Roraima and to the boundary between Brazil, Venezuela and British Guiana, and the last to the head of the Essequibo river and the Brazilian boundary. He also drafted the Aboriginal Protection Acts, for which he was accorded the thanks of the government of British Guiana. On his retirement from the British Colonial Service he was appointed the Curator of the Museum of the Royal Agricultural and Commercial Society, and at the same time filled the post of government archivist.

It is interesting to contrast the painstaking detail which marks the scientific work of Dr Roth with the breadth of his interests, for both characterised the physical and intellectual activity that marked his life. A man of magnificent stature, he was eminently fitted for the hard life of the back country of Australia and the bush of British Guiana which, despite its hardships, never ceased to attract him. Only two years before his death, at the age of seventy, he enthusiastically discussed his plans for yet another field-trip to engage in further study of the Indians of the interior of the Colony. It is not generally known that as Magistrate he occupied his time during the long evenings in the bush making translations of obscure Dutch, Swedish and German accounts of early discoveries in British Guiana. One of these which achieved publication was a translation of Schomburgk's "Travels in Guiana and on the Orinoco, 1835-1839." Other translations which he made, but which have not been published, were of A. Van Berkel's "Travels between Demerara and Berbic Rivers and in Suriname (1670-1689)," excerpts from J. J. Hartsinck's "Beschryving van Guiana," Joest's "Ethnology of Surinam Coastal Arawaks and Caribs," and Koch-Gruenberg's three-volume work "From Roraima to the Orinoco," to name only four important items from a list of seventeen such translations. It is hoped that publication of a number of these can be arranged. At the time of his death he had prepared a collection of sociological notes from the local press of Georgetown for the period from 1831 to 1851. It is hoped that these will be published by the Government of British Guiana, with a preface by Sir Edward Denham.

His rich life included experiences as medical officer to a travelling dramatic company, editor of a newspaper, and ship's doctor on a vessel going around the world. He was a wood-carver by avocation, being especially interested in inlay work, and was a talented cartoonist. His ability as an artist will be at once apparent to anthropologists when it is stated that the large number of plates reproducing details of Guiana Indian basketry

published in the 38th Annual Report of the Bureau of American Ethnology were drawn by him. In spite of the fact that his work never took him into the centers of learning, he did not lack recognition. He was President of the Anthropological Section of the British Association for the Advancement of Science (1902) in Hobart, Tasmania; in the same year he was elected honorary Corresponding Member of the Berlin Anthropological Society. Two years later he was chosen an honorary Corresponding Member of the Royal Anthropological Institute, which organization awarded him honorary Fellowship in 1932. The same year, a similar honor was bestowed on him by the American Anthropological Association.

A man of gifted intellect and careful training, his scientific publications on the Australian Aborigines and the Guiana Indians will long stand as the definitive works in their fields. A list of the more important of his published works follows.

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1905. Report of the Royal Commission [Dr Roth] on the Condition of the Natives of Western Australia. Perth, 1905.

Notes on Government, Morals, and Crime Publications of the Australian Museum, Sydney, N S W. Brisbane, 1905

1908 Catch-Cradle in British Guiana. *Études Ethn. et Soc.*, Nos 4-5 Paris, 1908.

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1912. *Ibid*, Part IV, *Jour. of the Royal Anth. Inst.*, 15, 529-40, 1912

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Old Time Indians. *Timehri*, 1, 1911.

1912. On the Native Drinks of the Guianese Indians *Timehri*, 2, 1912.

1915. An Inquiry into the Animism and Folklore of the Guiana Indians 30th Ann. Rep. Bureau of Amer. Ethnology, 103-396, 1915

1921 Some Examples of Indian Mimicry, Fraud, and Imposture *Timehri*, 7, 1921.

1922-1923 Richard Schomburgk's Travels in British Guiana, 1840-1844. Translated by W. E. Roth. Georgetown, 1922-1923.

1924 An Introductory Study of the Arts, Crafts, and Customs of the Guiana Indians. 38th Ann. Rep. Bureau of Amer. Ethnology, 23-745, 1924.

1929 Additional Studies of the Arts, Crafts and Customs of the Guiana Indians, with special reference to those of Southern British Guiana *Bull.* 91, Bureau of Amer. Ethnology, 1929.

1931 Netcher's History of Guiana Translated by W. E. Roth Georgetown, 1931

Robert Hermann Schomburgk's Travels in Guiana and on the Orinoco, 1835-1839. Translated by W. E. Roth Georgetown, 1931.

NORTHWESTERN UNIVERSITY  
EVANSTON, ILLINOIS

**D**R FREDERICK STARR, Associate Professor Emeritus of Anthropology at the University of Chicago, died of bronchial pneumonia in Tokio, Japan, August 14, 1933 at the age of seventy-four.

After graduating from Lafayette College in 1882 he served for two years as instructor in biology in secondary schools, while continuing his graduate work. Upon receiving the Ph.D. degree in 1884, he was appointed Professor in Biology at Coe College. Gradually his interests shifted to anthropology and in 1889 he was placed in charge of ethnology at the American Museum of Natural History. Three years later he was chosen by President Harper to organize anthropological teaching at the new University of Chicago. In this institution he served successively as Assistant and Associate Professor and also as Curator in Walker Museum until his retirement in 1923.

Field studies took him to various Indian tribes in the United States and Mexico, to Japan, the Philippines and Africa. In these investigations he sought to identify himself as closely as possible with the native population and in Japan at least donned native dress.

His strong friendships for the people and countries visited, his ability to interpret the lives and customs of other peoples, and his enthusiasm led to crowded classrooms. Perhaps Professor Starr's greatest contribution lies not in his formal publications but in the wide interest he created in the field of anthropology, and the appreciation for other peoples which he engendered in his students. His popularity is attested by the presentation, at the time of his retirement, of a large purse contributed by his former students with which to purchase a home in Seattle, a location convenient for his frequent trips to Japan.

Foreign nations recognizing the service Professor Starr was performing in bringing about better understanding among the peoples of the world conferred on him many honors. He was a Chevalier of the Order of the Crown of Italy, a member of the Order of the Sacred Treasure of Japan, Officer of the Order of Leopold II, palms of Officer of Public Instruction (France), and was awarded medals by Holland, Belgium and Liberia.

In preparation for the Saint Louis Exposition he visited northern Japan and brought to America a group of Ainu and an exhibit which was awarded a grand prize.

He was the author of many papers and fifteen volumes, the best known of which are "First Steps in Human Progress," "Indian Mexico" and "Korean Buddhism."

At the foot of Fujiama, which he often visited, Japanese admirers are erecting a monument "to Professor Starr the friend of all peoples."

## REPORTS

### PROCEEDINGS OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION FOR THE YEAR ENDING DECEMBER 1933

The American Anthropological Association held its thirty-second annual meeting at the Ohio State Museum and the Deshler-Wallick Hotel, on December 27-29, 1933, in conjunction with the American Folk-Lore Society.

#### COUNCIL MEETING, DEC. 27, 5:00 P.M.

President Fay-Cooper Cole in the chair. The minutes of the Atlantic City meeting, 1932, were not read but were approved as printed in the *AMERICAN ANTHROPOLOGIST*, vol. 35, no. 2.

#### REPORT OF SECRETARY

The President appointed the following committees and representatives during the year:

Research Committee. F.-C. Cole (chairman ex officio), F. Boas, A. Radcliffe-Brown, J. M. Cooper, R. B. Dixon, A. V. Kidder, A. L. Kroeber, R. Linton, R. H. Lowie, E. Sapir, J. R. Swanton, A. M. Tozzer, C. Wissler.

Nominating Committee. A. L. Kroeber (chairman), C. L. Guthe, A. V. Kidder.

Program Committee. J. M. Cooper (chairman), M. J. Herskovits, H. C. Shetrone.

Representative of AAA on Supervisory Board of American Year Book Corporation. Clark Wissler.

The American Anthropological Association met with the American Association for the Advancement of Science at Chicago, June 22-24, 1933, on the occasion of the Century of Progress Exposition. The local committee in charge, appointed by the President, consisted of: Henry Field (chairman), M. J. Herskovits, H. Hoijer (For report of meeting, see AA, n.s. 35, no. 4: 795-96).

The sub-committee of the Research Committee met in New York on Jan. 21, 1933. A memorandum on emergency field work was drawn up and sent to the Rockefeller Foundation on March 6, 1933. By letter of April 26, 1933, the President of the Foundation replied stating that the Foundation was unable to finance the project.

The membership of the Association, as of December 1, 1933, is as follows:

Number of members	925
Honorary	0
Life	10
Regular	915
Deceased during 1933	13
Dropped " " "	49
Resigned " " "	55
Admitted " " "	50

The Association has lost by death during the year thirteen members: Walter E. Roth (honorary member), Caroline Feist, S. C. Evans, Caleb B. Stetson, G. H. Perkins, Harry W. Cartwright, Edward D. Adams, John Hubbard, Zelia Nuttall, Frederick Starr, Daniel Folkmar, William Henry Holmes, Mrs. F. Wilson Popenoe.

The Secretary attended the Ninth Annual Conference of the Secretaries of the Con-

stituent Societies of the American Council of Learned Societies, at Philadelphia, Pa., January 28, 1933.

Respectfully submitted,  
JOHN M. COOPER, *Secretary*

It was voted that the Secretary's report be accepted.

#### REPORT OF TREASURER

The present bank balances in the four funds of the Association stand as follows:

Regular Fund	\$3,950.14
Permanent Fund	3,149.22
Index Fund	1,124.53
Memoirs Fund	1,032.58

This makes a total of \$9,256.47, of which \$8,563.75 is drawing interest in four savings accounts (Bank of America, Bank of California, San Francisco Bank, Wells Fargo Bank and Union Trust Co.). The \$3,950.14 of the Regular Fund is divided between a checking account with a present balance of \$692.72 and a savings account of \$3,257.42.

The large size of the Regular Fund balance (some \$500 more than a year ago) is deceptive, since there are 1933 expenses to be met. These are the printer's bills for (1) number 4, *AMERICAN ANTHROPOLOGIST*, and (2) reprints from number 3. The unexpended balance of the 1933 budget appropriation for the *AMERICAN ANTHROPOLOGIST* should be reappropriated to meet these bills.

The cost of reprints furnished free to authors can be materially reduced by supplying them without covers and title pages, as is done by the *Journal of American Folk-Lore*. Of the \$365.38 spent on reprints of three issues, \$61.18 was for covers alone. This indicates that the annual saving by abandoning covers will be about \$80.

The cost of Memoirs 40 and 41 exceeded the \$750 supplied by the National Academy of Sciences and made necessary the utilization of \$67.02 of the slender Memoirs Fund which has been gradually accumulating, leaving in that fund a balance of only \$32.58 aside from the \$1,000 in hand for publishing the *Walapai Ethnography* by Professor Kroeber et al.

The half-time assistant to the Editor and the Treasurer typed 50 form letters to membership prospects, all that her limited time allowed. These resulted in the addition of 5 members.

The Association's regular recurrent income for 1933 was only \$4,833.49, while the 1933 budget appropriation made at the last annual meeting was \$5,790. It is obvious that a reduced budget for 1934 must be submitted, as there is no reason to assume at the present time that the 1934 income will be any greater than the 1933. If anything, it may be less. The following budget is the joint recommendation of the Editor and the Treasurer.

1. Secretary's expenses.		\$	80
2. Editor's expenses			
Editor's assistant	\$	480	
Office expenses		60	540
		<hr/>	
3. Treasurer's expenses			
Treasurer's assistant.	\$	360	
Office expenses.		90	
Membership charges		25	475
		<hr/>	

4. American Anthropologist		
Printing	\$2,890	
Illustrations	300	
Reprints	240	
Distribution	180	
Insurance storage back numbers	70	3,680
5. Out-of-print publications		—
6. American Council of Learned Societies		25
Total for 1934 expenditures		\$4,800
7. To meet unpaid 1933 bills, unexpended 1933 balance of		\$1,262 02
Grand total		\$6,062 02

In view of the Editor's resignation it seems advisable for the Treasurer to hereby tender his resignation. There is an advantage in having both officers in one institution, since both require part-time clerical assistance, and a single half-time assistant for the two is preferable to two quarter-time assistants.

In accepting the Treasurer's resignation the Council should authorize him to continue the employment of the part-time assistant and to sign checks until the books and moneys have been transferred to the new Treasurer.

The detailed financial report follows:

#### REGULAR FUND

##### *Receipts*

Balance on hand December 1, 1932		\$3,439.80
Membership dues		
American Ethnological Society	\$ 635 50	
Anthropological Society of Washington	220 00	
Central States Branch	311 00	
American Anthropological Association		
1929-1930, 1931	\$ 24 00	
1932	192 00	
1933	2,798 03	
1934	237 13	
1935-1936	12 00	
		\$3,263 16
Sale of Publications		239 56
Reimbursements		237 91
Interest (Regular Fund only)		117 27
		\$8,464 20

##### *Disbursements*

American Anthropologist	
George Banta Publishing Company and Oakland	
National Engraving Company	
Printing	\$1,972 28
Illustrations	650 12

Distribution	157 44		
Storage, insurance	68 50		
Reprints	365 38	83,213 72	
<hr/>			
Editor's expenses	533 61		
Treasurer's expenses	489 24		
Secretary's expenses	80 00		
Research Committee's expenses	31 67		
Out-of-print publications	165 82	84,514 06	
<hr/>			
Cash on hand, November 30, 1933		3,950 14	88,464.20
<i>Resources</i>			
Cash on hand, November 30, 1933			83,950 14
Due from sales		\$ 13 34	
Due from dues:			
1932: American Anthropological Association	\$ 204 00		
1933: American Anthropological Association	252 00		
American Ethnological Society	128.75		
Central States Branch	65 00	649 75	
<hr/>			
Due from reimbursements		6 88	699 97
<hr/>			
			84,620 11
<i>Liabilities</i>			
Membership dues for 1934-1936 already paid		\$ 249 13	
Net excess resources over liabilities		4,370 98	84,620 11
<hr/>			
PERMANENT FUND			
<i>Receipts</i>			
Balance, December 1, 1932		83,294 27	
Interest on savings account to Sept. 30, 1933	\$ 133 29		
Interest on three Liberty Bonds	12 75	146 04	83,440 31
<hr/>			
<i>Investment</i>			
Liberty Bonds (three)		\$ 291 39	
Cash in savings account, Nov. 30, 1933		3,149 22	83,440 31
<hr/>			
INDEX FUND			
Balance, December 1, 1932		\$1,057 53	
Interest on savings account		37 00	
<hr/>			
Cash in savings account, Nov. 30, 1933			\$1,124 53
<hr/>			
MEMOIRS FUND			
<i>Receipts</i>			
Balance, December 1, 1932		\$1,798 60	
Gift of Mrs. Margaret F. B. Fleming	\$ 4 00		
Interest on savings account	47 00	51 00	\$1,849 60
<hr/>			



*Disbursements*

Memoirs, number 40 (Lattimore)			
Oakland National Engraving Co	\$ 14 33		
George Banta Publishing Co.	347 62	\$ 361 95	
<hr/>			
Memoirs, number 41 (Herskovits)			
Oakland National Engraving Co	\$ 51 82		
George Banta Publishing Co	403 25	\$ 455 07	\$ 817.02
<hr/>			
Cash in savings account, Nov. 30, 1933		\$1,032.58	\$1,849.60
<hr/>			

## EXPENDITURES AGAINST 1933 BUDGET

	<i>Allowed</i>	<i>Spent*</i>	<i>Balance</i>
Secretary's expenses	\$ 100 00	\$ 80 00	\$ 20 00
Editor's expenses.			
Editor's assistant	480 00	480 00	
Office expenses	100 00	53.61	
	<hr/>	<hr/>	
	580.00	533.61	46.39
Treasurer's expenses			
Treasurer's assistant	360 00	360 00	
Office expenses	100 00	59 24	
Membership expenses	25.00	28.00	
American Council Learned Societies	25.00	25 00	
	<hr/>	<hr/>	
	510 00	472 24	37 76
American Anthropologist:			
Printing..	3,050.00	1,972.28	
Illustrations	640.00	550.12	
Reprints.	300.00	249 44	
Distribution.	200.00	157 44	
Insurance; storage back numbers	70.00	68.50	
	<hr/>	<hr/>	
	4,260 00	2,997 78	1,262 22
Out-of-print publications			
Purchase	100 00	7 50	
Photostat reproductions	200 00	158.32	
	<hr/>	<hr/>	
	300 00	165 82	134.18
Research Committee	40 00	31.67	8 33
	<hr/>	<hr/>	
Totals	\$5,790.00	\$4,281.32	\$1,508 88

\* This column lists net expenditures, i.e., gross expenditures less reimbursements.

## REGULAR RECURRENT INCOME AND EXPENDITURES

	<i>Income</i>			
	1930	1931	1932	1933
Memb. dues from affil societies at \$5	\$1,653.50	\$1,198.50	\$1,324.25	\$1,166.50
Memb. dues collected directly at \$6 (less subscription commissions)	3,756.84	3,919.92	3,703.32	3,263.16
Total dues	5,410.34	5,118.42	5,027.57	4,429.66
Sales of publications.	533.42	729.21	570.22	239.56
Interest and royalty (Regular and Memoirs Funds)	153.00	153.00	153.72	164.27
Total	\$6,096.76	\$6,000.63	\$5,751.51	\$4,833.49
	<i>Expenditures</i>			
	1930	1931	1932	1933
American Anthropologist, printing and Illustrations:				
No. 4 of preceding year (part)	\$ 643.09	\$ 104.42		
Nos. 1-3 of year.	2,904.11			\$2,522.40
No. 4 of year (part)	538.84			
No. 1 of next year.	65.90			
Nos. 1-4 of year		3,349.55	\$3,462.33	
Total.	\$4,142.84	\$3,453.97	\$3,462.33	\$2,522.40
Anthropologist and Memoirs (distrib., storage, insur., net cost gratis reprints).	\$ 507.29	\$ 583.77	\$ 465.81	\$ 475.38
Memoirs print. and ill. paid by Assoc.	539.72			67.02
Total account publications.	5,189.95	4,037.74	3,928.14	3,065.00
Sec'y, Treas., and Ed.'s offices	1,141.74	1,272.47	1,094.03	1,085.85
Reprinting and purchase out-of-print publs	118.28	181.31	296.22	165.82
Total.	\$6,459.97	\$5,491.52	\$5,318.39	\$4,316.47
Surplus carried over		\$ 509.11	\$ 433.12	\$ 517.02
Deficit	\$ 363.21			

Respectfully submitted,

E. W. GIFFORD, *Treasurer*

It was voted that the Treasurer's report be accepted, subject to the findings of the Auditing Committee.

The President appointed the following Auditing Committee: Drs Clark Wissler and Edward Sapir.

The President appointed the Executive Committee of the American Anthropological Association to serve as a Budget Committee and to report to the Association at the annual meeting, December 28, 1933.

It was voted that the retiring Treasurer be authorized to continue the employment of part-time assistant and to sign checks until the books and funds of the Association have been transferred to the incoming Treasurer.

It was voted that the resignation of E. W. Gifford as Treasurer be accepted.

## REPORT OF AUDITING COMMITTEE

The undersigned, appointed as Auditing Committee by the Council of the Association, report that they have examined the Treasurer's accounts as submitted for the fiscal year 1933, and find them correct.

CLARK WISSLER

EDWARD SAPIR

## REPORT OF EDITOR

At the time of writing, the last page proofs of the year, indicating a volume of 804 pages, had been returned to the printer so that the fourth issue of 1933 may have been distributed at the time of the annual meeting. Two memoirs, published through a grant by the National Academy of Sciences, have been recently distributed, viz., M. J. and F. S. Herskovits' *An Outline of Dahomean Religious Belief*, and O. Lattimore's *The Gold Tribe; "Fishskin Tatars" of the Lower Sungari*. E. C. Parsons' *Hopi and Zuñi Ceremonialism* is on the point of being distributed.

Volume 16, no. 3, formerly out-of-print, has been photostated by Breitkopf and Härtel during the year, and the hundred copies stored with the George Banta Publishing Company.

In order to preclude an otherwise inevitable delay in the appearance of the first issue of the new year the Editor, mindful of a corresponding offer by Dr Swanton, has proposed that he be empowered to proceed with the requisite preparations, to see the issue through the press, and to engage editorial assistance for the purpose at the usual rate of compensation. In President Cole's absence this authorization was secured through the Secretary of the Association and Vice-President Shetrone.

In his valedictory Report for 1923 (AA 26: 125, 1924), Dr Swanton suggested a board of specialists as the ideal solution of the editorial problem. He envisaged one salaried editor to devote all his time to the journal and a supporting body of volunteer assistants to give expert advice. In the present circumstances part of this plan seems utopian, but the utilization of an editorial board may be recommended to the future management. Certainly the innovation of having an associate editor specially concerned with North American archaeology has proved extremely helpful.

As the retiring Editor has pointed out (AA 29: 307, 1927), difficulties go back to a single ultimate source, inadequate funds. Business cannot be dispatched with ideal expedition by a single half-time assistant, a regular Memoir series cannot be re-established, long articles must be shelved unless more money is forthcoming. What is more, many authors of high repute—especially in Europe—might present contributions if it were possible to offer at least a nominal honorarium for their labors. But this, again, is lapsing into Utopianism. The matter is mentioned merely in order to explain in part why the journal has not always been what the Editors would have liked it to be.

In the present financial crisis, the Editor in consultation with the Treasurer feels reluctantly compelled to urge still further economies. For the exact figures, reference to the Treasurer's Report suffices. We suggest a budget based on the past year's income and specifically propose the following changes. In order to maintain the present amount of space for articles the allowance for illustrations shall be cut to less than half; the membership list shall be printed only biennially; reprints shall be furnished without cover except in so far as authors consent to bear the entire charge.

Certain specific points of editorial policy may also be brought to the attention of the Association at this time.

At times rumors have been circulated of favoritism on behalf of Californian contributors.

Certain facts in this situation should be understood. The presence of an editorial office in an academic community inevitably attracts contributions from non-anthropological as well as anthropological sources, and in so far as they prove worthy there is no reason for rejecting them. On the other hand, the Editor has deliberately favored Californians as reviewers in the interests of economy, both as to money and time. It costs money to mail or express books across the continent; and it is a great convenience when remiss reviewers can be dunned by word of mouth. Whenever a book has been of special character, however, an expert in the field has usually been sought irrespective of residence. But to seek and to find are not synonymous terms.

Another criticism is not without some semblance of justice. Some unworthy articles have appeared in the journal. It should, however, be recalled that when the present Editor assumed charge the dearth of available contributions forced him to issue frantic appeals for aid. The psychological "set" acquired by the Editor in those days of famine doubtless survived to some degree into the rapidly developing era of overabundant supply, but it is believed that inferior material has been decidedly rarer during the last few years. Certainly no article of significant value has ever been declined.

The opinion is periodically voiced that the *AMERICAN ANTHROPOLOGIST* ought to be devoted wholly or predominantly to Americanist topics. There is neither precedent for such a view in the earlier policy of the journal nor in the constituency of our membership. The Association embraces a fair number of members whose primary interests lie in other than American fields, and their numbers are, if anything, increasing. I need merely mention the names of Drs Laufer, Linton, Herskovits, Radcliffe-Brown, Lloyd Warner, Cole, Malinowski. Figures bearing on this point were published in an editorial Report (AA 31: 319, 1929). A recent count indicates 139 foreign members out of an approximate total of about 910. In other words, about 15 per cent of our membership is actually non-American by residence. Nevertheless, the majority of our articles continue to deal with the New World. Relevant misgivings should be allayed by the following comparative figures for the years 1924-1933

American Archaeology and Ethnography	187 articles
Africa	7 "
Oceania	12 "
Asia and Indonesia	17 "
Australia	8 "
General Culture History	11 "
Old World Prehistory	7 "
Theory	44 "
Linguistics	4 "
Obituaries	17 "
Miscellaneous	15 "

Actually the figures understate the case, for many articles under the last four heads are primarily of interest to Americanists.

The Editor would like to remind his successor of a grant of \$2,000 from the Carnegie Corporation, secured through the efforts of Dr Kidder (AA 33: 276, 1931), who with the assistance of Mrs Marion Hale Britten, prepared an Index for the publications of the Association through 1928. With this gift the Association assumed the obligation of publishing a new Index within five or ten years. The balance of the grant has increased through interest from \$1,007.21 to \$1,124.53.

In conclusion the Editor wishes to thank those members of the Association who have given him moral support during a term of office not always free from misunderstandings. In

particular he wishes to thank the Associate Editors,—his old friend and fellow-student Frank G. Speck; Dr F. H. H. Roberts, Jr., whose help has been invaluable during the last two years; and Mr E. W. Gifford, to whose untiring efforts the Association owes much of what is commendable in its journal—quite apart from his services as Treasurer. The Editor also wishes to acknowledge his gratitude to his predecessors, Drs Swanton and Hodge, who gave him encouragement at a time when he needed it.

Respectfully submitted,

ROBERT H. LOWIE, *Editor*

It was voted that the Editor's report be accepted.

It was voted that the resignation of Robert H. Lowie as Editor be accepted.

The President appointed the following Committee on Resolutions: Drs C. E. Guthe, Ralph Linton, Earl H. Bell.

It was voted:

That the request of the Army Medical Library for complimentary reception of the AMERICAN ANTHROPOLOGIST, in view of present shortage of funds, be granted, and that the American Anthropological Association express to the authorities of the Army Medical Library its appreciation of the contribution to scientific research being made by the Army Medical Library.

That a committee of two be appointed by the President to study the problem of honorary membership in the American Anthropological Association and to select and recommend to the next annual meeting a list of honorary members to be elected.

#### ANNUAL MEETING, DECEMBER 28, 1:30 P.M.

President Fay-Cooper Cole in the Chair. The following officers, Council members, representatives to councils and associations, and new members of the American Anthropological Association<sup>1</sup> were submitted by the Nominating Committee (Drs Kroeber, chairman, Guthe, Kidder) and were elected:

President, Fay-Cooper Cole

First Vice-President, A. R. Radcliffe-Brown

Second Vice-President, Herbert J. Spinden

Secretary, John M. Cooper

Treasurer, C. B. Osgood

Editor, Leslie Spier

Associate Editors, F. G. Speck, F. H. H. Roberts, Jr., C. B. Osgood

Executive Committee, Neil Judd, Matthew Stirling, A. M. Tozzler

#### *Council*

New Members. For term 1934-37: R. Beals, Scudder Mekeel, W. M. Walker, R. Zingg, Carolyn Adler, A. G. Morice, A. Caso. For term 1934-36: S. S. Newman, F. L. Eggan, F. S. Dellenbaugh, Cora DuBois, F. B. Kniffen, Ralph Roys, J. C. Tello. For term 1934-35: C. F. Voegelin, H. Hoijer, E. Reynolds, May Mandelbaum, M. Uhle, L. E. Valcarcel. For term 1934: J. G. Leyburn, Regina Flannery, S. Tax, G. MacGregor, V. F. Ray, C. D. Forde, A. de Hostos

B. Cummings, R. L. Olson, L. Spier, H. B. Collins, Jr., H. W. Krieger, F.-C. Cole, R. Redfield, E. A. Hooton, W. D. Wallis, Frances Densmore, G. G. Heye, S. K. Lothrop, H. L.

<sup>1</sup> The names of the new members will be published in the next printed list to appear in the AMERICAN ANTHROPOLOGIST

Shapiro, Ellen Spinden, H. J. Spinden, Agnes C. L. Donohugh, Ruth Mackaye, W. M. Krogman, F. G. Speck, H. Newell Wardle, J. E. Pearce, Wm. C. McKern, R. B. Bean, Harper Kelley (1937).

C. M. Barbeau, G. T. Bowles, G. H. Fox, B. Haile, D. G. Haring, G. Herzog, F. de Laguna, E. Kopta, P. A. Means, H. P. Mera, N. Morss, J. L. Nusbaum, L. M. O'Neale, L. Outhwaite, A. R. Radcliffe-Brown, M. J. Rogers, L. Satterthwaite, Jr., R. Thurnwald, R. Underhill, A. Woodward, S. A. Barrett, M. W. Beckwith, R. F. Benedict, C. W. Bishop, F. Blom, C. S. Coon, C. B. Davenport, E. F. Greenman, G. B. Grinnell, E. Gunther, A. I. Halliwell, M. J. Herskovits, A. E. Jenks, N. M. Judd, R. Linton, J. C. McGregor, B. Oetteking, A. C. Parker, V. Petrullo, G. Reichard, Helen H. Roberts, J. H. Steward, M. W. Stirling, R. J. Terry (1936).

Harriett M. Allyn, Manuel Andrade, R. F. Barton, Wendell C. Bennett, H. Bingham, L. Bloomfield, Biren Bonnerjea, Charles Brown, P. H. Buck, R. Bunzel, Douglas Byers, Emile Cailliet, William H. Claflin, W. B. Cline, C. B. Cosgrove, C. H. Danforth, D. S. Davidson, Ellsworth Faris, H. Field, Reo Fortune, Lawrence Foster, E. W. Gifford, E. A. Golomshtok, W. D. Hambly, M. R. Harrington, L. Havemeyer, C. H. Hawes, J. N. B. Hewitt, E. B. Howard, M. Jacobs, D. Jenness, Charles R. Keyes, Berthold Laufer, Charles T. Loram, R. H. Lowie, T. F. McIlwraith, Robert McKennan, Paul S. Martin, J. A. Mason, M. Mead, W. K. Moorehead, C. B. Moore, George P. Murdock, N. C. Nelson, P. H. Nesbitt, W. F. Ogburn, Frans M. Olbrechts, A. T. Olmstead, E. C. Parsons, E. K. Putnam, O. Ricketson, Henry B. Roberts, Carl Ruppert, J. T. Russell, Jr., E. Sapir, M. H. Saville, Max Schrabisch, A. H. Schultz, D. Scott, Frank M. Setzler, H. I. Smith, W. D. Strong, J. Eric Thompson, G. C. Vaillant, H. Webster, A. E. White, L. A. White, C. C. Willoughby, W. J. Wintemberg, George Woodbury (1935).

C. Amsden, H. Beyer, P. A. Brannon, J. H. Breasted, K. M. Chapman, F. E. Clements, H. S. Colton, J. M. Cooper, T. Deuel, K. P. Emory, G. Engerrand, Lucy Freeland, Anna H. Gayton, M. R. Gilmore, H. S. Gladwin, Charlotte D. Gower, W. K. Gregory, S. J. Guernsey, C. E. Guthe, H. U. Hall, E. S. Handy, L. L. Hargrave, J. P. Harrington, C. L. Hay, M. Hellman, L. W. Jenkins, J. H. Kellogg, Isabel T. Kelly, A. V. Kidder, O. LaFarge, A. Lesser, E. M. Loeb, W. C. MacLeod, T. Michelson, E. H. Morris, C. B. Osgood, H. Powdermaker, W. A. Ritchie, F. H. H. Roberts, Jr., L. Schellbach, H. C. Shetrone, V. Stefansson, J. B. Stetson, Jr., T. W. Todd, W. L. Warner, G. Weltfish, G. D. Williams, F. R. Wulsin (1934).

Past Presidents (*ipso facto* members of the Council): F. Boas, R. B. Dixon, F. W. Hodge, A. L. Kroeber, C. Wissler, W. Hough, A. Hrdlička, M. H. Saville, A. M. Tozzer, G. G. MacCurdy, J. R. Swanton.

Representative to Social Science Research Council: A. M. Tozzer.

Representatives to National Research Council: A. E. Hooton, F. H. H. Roberts, Jr., R. Redfield (to 1937).

Representatives to Section H, A.A.A.S.: E. A. Hooton, Bruno Oetteking (for 1934).

Representative on Governing Body of International Institute of African Languages and Cultures: M. J. Herskovits.

The Budget Committee presented the following budget recommendations for 1934:

1. Secretary's expenses		\$ 80
2. Editor's expenses		
Editor's assistant	\$480	
Office expenses	60	540
	—	

3. Treasurer's expenses			
	Treasurer's assistant	\$ .360	
	Office expenses	90	
	Membership charges	25	475
		- -	
4. American Anthropologist			
	Printing	\$2,890	
	Illustrations	300	
	Reprints	240	
	Distribution	180	
	Insurance; storage, back numbers	70	3680
		-----	
5. Out-of-print publications			
			-----
6. American Council of Learned Societies			
			25
			-----
	Total for 1934 expenditures	\$4,800	
7. To meet unpaid 1933 bills, unexpended 1933 balance of		\$1,262.02	
	Grand total	\$6,062.02	

In presenting this budget the Committee further recommended:

1. That reprints that are furnished to contributors be furnished without covers;
2. That the editor be empowered to charge at cost for reprints, if he considers this advisable;
3. That the editor be asked to give consideration to the possibility of having contributors abbreviate, so far as consistent with the subject treated, the articles submitted and accepted for publication;
4. That the editor be empowered to expend for illustrations up to double the amount of the budget allowance therefor, if he sees fit, such additional sum to be charged against and drawn from the budget allowance or allowances for printing and reprints.
5. That the Executive Committee be empowered to make available to the editor for the AMERICAN ANTHROPOLOGIST for 1934 expenditures an amount up to \$1,000 over and above the budget allowance should funds from current 1934 income become available over and above the prospective 1934 income.

It was voted that the budget and recommendations as submitted by the Committee be accepted

The following resolutions presented by the Committee on Resolutions were adopted

*Resolved*, that the American Anthropological Association record its sincere appreciation of the long and faithful service rendered to it by Robert H. Lowie as Editor of the AMERICAN ANTHROPOLOGIST. As the guardian of the policies of our official publication he has been responsible for the good name of our Association among our colleagues. Our present international standing is in large measure the result of his judgment and wisdom. We recognize the many problems which have come to him in his contacts with authors, printers and subscribers, and the drain this has been upon his time and good nature. While we recognize the justice of his request that the mantle of editorship be passed on to another, we shall miss his kindly leadership. We hope that his gifts to the Association will be returned to him many fold in the years of research and teaching which lie before him.

*Resolved*, that the American Anthropological Association express its gratitude to Edward W. Gifford for his labors in behalf of the Association as its Treasurer. The life of the Association

is in a very real sense dependent upon a careful guardianship of its economic status. The meticulous care with which he has performed promptly and efficiently the duties of the office as well as the many courtesies by which we have all profited has created a real esprit de corps among the members. Through his indefatigable efforts the membership of the Association has grown significantly and its influence has been increased. We regret the loss of his guidance in our financial problems, and wish him equal success in his future undertakings.

*Resolved*, that the American Anthropological Association record its sense of loss because of the death during the past year of the following members: Edward D. Adams, Harry W. Cartwright, S. C. Evans, Caroline Feist, Daniel Folkmar, William Henry Holmes, John Hubbard, Zelia Nuttall, G. H. Perkins, Mrs. F. Wilson Popenoe, Walter E. Roth, Frederick Starr, and Caleb B. Stetson. The excellent work of William Henry Holmes, both as a scientific leader and head of the Anthropological Section of the U. S. National Museum, laid the foundations for archaeological work in the New World. Mrs. Nuttall's enthusiastic labors in the interests of Mexican archaeology are known to all. Walter E. Roth's studies among the natives of South America have become classics. Frederick Starr, formerly professor of anthropology at the University of Chicago, was well known as a stimulating teacher and sympathetic student of other cultures than our own.

*Resolved*, that the American Anthropological Association express its appreciation of the courteous hospitality extended to its members who attended the annual meeting at Columbus. Especial thanks are due the Ohio State Archaeological and Historical Society, Director H. C. Shetrone and the staff of the Ohio State Museum, and the management of the Deshler-Wallick Hotel. Thanks are also given to the Licking County Historical Society and the Newark Chamber of Commerce for their kindness and hospitality.

It was moved that.

*Whereas* The utilization of Stone (employing the term in its broader sense, to include flint, clay and other rocks and minerals) acknowledge is a basic concept of human material culture; and that not only does human civilization rest directly on a foundation of stone (the "metal" of primitive peoples) but that the interpretation and translation of primitive culture through archaeological method is primarily dependent upon study of the use and methods of use of Stone in its various forms; and

*Whereas* Consideration of potentialities inherent in Stone as a source of information in the study of primitive culture indicates two principal phases of inquiry, as follows:

(A) Physical study of material substances with the objective of determining sources and use-distribution and, through these, migrations, contacts and cultural relationships.

(B) Exhaustive study of, and experimentation in, methods of working stone, with special reference to the art of chipping flint, with the idea of ascertaining just how the better examples of primitive handiwork in flint were produced. While the basic principles of the process of flint working are known to have been percussion and pressure, their application in the fabrication of flint artifacts of certain forms and types has not been successfully demonstrated. Therefore,

*Be it Resolved*: That the American Anthropological Association, in annual convention assembled at Columbus, Ohio, on December 28, endorse an attempt to find ways and means for (1) the establishment of a clearinghouse and laboratory for the comparative study and analysis of stone materials, the laboratory to be in connection with some existing organization where needed facilities and professional services may be available, and (2) that ways and means be sought for engaging and remunerating a competent individual to carry on a series of experiments, in connection with one or another of the museums specializing in American archae-



ology, to determine the mechanical processes necessary to produce the highly specialized flint products of aboriginal man.

It was voted that the American Anthropological Association approves the foregoing motion in principle and refers it to the Executive Committee for action

#### PROGRAM

WEDNESDAY, DECEMBER 27

9:30 A.M.

W. C. Beasley, A Hue Scale and Pattern Notation for the Study of Eye Color, with Preliminary Results on Color in 500 Newborn Infants (Lantern).

Paul H. Nesbitt, Burial Methods during the Early Capsian Age in North Africa (Lantern).

Earl H. Bell, (in collaboration with Willem Van Royen), The Pleistocene Controversy in Nebraska (Lantern)

Nels C. Nelson, History of North American Archaeology (By Title).

Frank G. Speck, Siouan Tribes of the Carolinas as Known from Catawba, Tutelo and Documentary Sources (By Title).

John M. Cooper, World Distribution of Alcoholic Beverages.

2:00 P.M.

Fay-Cooper Cole, Some Old Haunts Revisited.

Margaret Mead, Report on Arapesh Tribe of New Guinea (By Title).

Reo F. Fortune, Report on Field Work in the Sepik River Basin (By Title)

Melville J. Herskovits, Marriage and Divorce in Dahomey.

Harry Hoijer, A Classification of Southwest Athapaskan Languages.

Biren Bonnerjea, Hunting Superstitions of the American Aborigines (By Title).

Ralph Linton, The Concept of Power among the Comanche.

7:00 P.M.

Dinner of welcome at Faculty Club. The members were guests of the Ohio State Archaeological and Historical Society. Paper after dinner at Ohio State Museum by H. C. Shetrone, Nicotiana: An Ethnologic, Historic and Literary Novelty.

THURSDAY, DECEMBER 28

9:00 A.M.

Martha Beckwith, Some Problems of the Hawaiian Song of Creation.

Gladys Reichard, Scientific Standards.

Melville J. Herskovits, Animal and Human Tales in Negro Folk-Lore.

A. L. Campa, Two Cycles of Folk Drama in New Mexico.

Regina Flannery, Gossip as a Clue to Attitudes.

John M. Cooper, The Religion of the Eastern Cree.

1:30 P.M.

#### *Symposium on the Mound-Builder Problem*

Warren K. Moorehead, The Present Status of our Mound-Builder Problem.

Emerson F. Greenman, The Distribution of the Hopewell Culture (Lantern)

Thorne Deuel, Basic Cultures of the Mississippi Valley (Lantern).

7:00 P.M.

*Annual Dinner of AAA and AFLS*H. C. Shetrone, *The Archaeology of the Valley of Mexico* (a motion picture).

FRIDAY, DECEMBER 29

9:00 A.M.

Fred Eggan and Sol Tax, North American Social Organization:

I Certain Problems Defined (F. Eggan).

II Toward a Solution (S. Tax).

John Gillin, Social Organization of the Barama River Caribs of British Guiana (Lantern).

Robert M. Zingg, Reformulation and Statistical Verification of the Age-Area Concept (By Title).

B. W. Aginsky, Pomo Kinship Systems.

Albert B. Reagan, The Gosiute (Goshute) or Shoshoni-Goship Indians of the Deep Creek (Ibapah) Region in Western Utah.

Carl E. Guthe, A Suggested Classification of Archaeological Cultures.

Fay-Cooper Cole, Some Notes on Beyer's Archaeological Discoveries in the Philippines.

JOHN M. COOPER, *Secretary**American Anthropological Association*

## REPORT OF THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON

The Anthropological Society of Washington at its annual meeting held on January 16, 1934, elected the following officers for the ensuing year: *President*, Matthew W. Stirling; *Vice-president*, Frank H. H. Roberts, Jr.; *Secretary*, Frank M. Setzler; *Treasurer*, Henry B. Collins, Jr.; *Vice-President of the Washington Academy of Sciences*, Matthew W. Stirling; *Members of the Board of Managers*, Biren Bonnerjea, George S. Duncan, Herbert W. Krieger, William Duncan Strong.

The following is a report of the membership and activities of the Society since the annual meeting held on January 17, 1933.

## Membership:

Life members.	3
Active members.	46
Associate members	6
Honorary members	22
Corresponding members	22

Total	99
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## Deceased:

Active members.	1
Honorary members.	1

Total	2
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## Resigned:

Active members.	3
Associate members.	3

Total	6
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## New Members:

Active	2
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The Society lost through death the following members *Honorary* Prof W. H. Holmes, one of the founders of the Society and a past president, on April 20 1933, *Active* Captain Robert R. Bennett, on December 12, 1933

Members resigning at the close of the year were. *Active*: D. Percy Hickling, A. H. Shannon, and A. T. Sweet; *Associate*: Mrs Mitchell Carroll, Oscar B. Hunter and H. H. Kerr

Members elected during the year were: Mrs Margaret Wepley and the Honorable Dr Pedro M. Arcaya, Minister of Venezuela

The financial statement (Treasurer's report) is as follows:

Funds invested in Perpetual Building Ass'n.	\$1,114.06
21 shares Washington Sanitary Improvement Co., par value \$10 per share .	. 210.00
2 shares Washington Sanitary Housing Co., par value \$100 per share	200.00
Cash in bank. . . . .	. 246.04
<b>Total .</b>	<b>\$1,770.10</b>
Bills outstanding:	
To American Anthropological Ass'n	. \$60.00
To printer	3.75
<b>Total . .</b>	<b>\$63.75</b>
<b>Net Balance</b>	<b>\$1,706.35</b>

Papers presented before regular meetings of the Society were as follows:

January 17, 1933, 643rd regular meeting, The Probable Route of DeSoto through the southeastern States, by Dr John R. Swanton, ethnologist, Bureau of American Ethnology.

February 21, 1933, 644th regular meeting, Folk-Lore in Some Languages of Northern India, by Dr Biren Bonnerjea of the Foreign Mission School, Catholic University.

March 21, 1933, 645th regular meeting, Daily Life of the James Bay Cree, by Dr John M. Cooper, Catholic University of America.

April 18, 1933, 646th regular meeting, The Cultures of Stone Age Man in the Old World, by L. Lorne Wedlock.

October 17, 1933, 647th regular meeting, Notes on Southeastern Aboriginal History, by Dr John R. Swanton, ethnologist, Bureau of American Ethnology.

November 21, 1933, 648th regular meeting, Religion of the Eastern Cree, by Dr John M. Cooper, Catholic University of America.

The regular December meeting was cancelled by the Board of Managers. All regular meetings were held in room 43 of the new National Museum

FRANK H. H. ROBERTS, JR., *Secretary*

## AMERICAN ETHNOLOGICAL SOCIETY

### REPORT OF THE SECRETARY-TREASURER, 1933

The annual meeting of the American Ethnological Society was held on Monday, January 22, 1934 at 8.15 P. M. at the American Museum of Natural History.

The Secretary reported on the present membership of the Society which includes a total of 138 members as over against 152 of last year. Of this total, 14 are life members, 30 annual members, and 94 fellows.

Meetings have been held as usual in conjunction with the Section of Anthropology of the New York Academy of Sciences at the Museum of Natural History on the fourth Monday of each month, and the program of speakers has been as follows

Feb. 27: Maori Migrations and Culture, by Prof Peter H. Buck.

March 27: Wintu Songs, by Dr Dorothy Demetrakopoulou.

April 24: Historical Analysis of Culture, by Dr Alexander Lesser.

Oct. 23: Sorcery and Blackmail in a New Guinea Tribe, by Dr Margaret Mead

Nov. 27: Family Life among the Dakota Indians, by Miss Ella Deloria

Jan. 29: Some Relations of Southwest Cultures, by Dr Leslie Spier.

During 1933 Miss Ella Deloria's Dakota Texts, Memoir 14, the publication of which was financed by funds of the current year, was distributed. The Memoir of the Society for 1934—Dr Ruth Bunzel's Zuni Texts—financed by the Committee on Research in Native American Languages of the Council of Learned Societies is now in the process of being distributed. It was decided that the present balance of \$1,470.50, of which \$650 was received as a gift for publication purposes from the funds of the National Academy of Sciences, would be used to publish Dr Leonard Bloomfield's Cree Texts as the Memoir for 1935.

The following ticket for 1934 was then elected:

President: Dr Gladys Reichard, Columbia University.

First Vice President: Dr Elsie Clews Parsons, Harrison, New York.

Second Vice President: Dr Bruno Oettinger, Columbia University.

Secretary-Treasurer: Dr Alexander Lesser, Columbia University.

Editor: Dr Franz Boas, Columbia University.

Directors: Dr Clark Wissler, American Museum of Natural History.

Mr Clarence Hay, American Museum of Natural History.

Dr Ruth Benedict, Columbia University.

Respectfully submitted,

CAROLYN ADLER, *Secretary*

### TREASURER'S REPORT

February 1, 1933 to February 1, 1934

#### CURRENT FUND

##### *Receipts*

Balance in Current Fund, February 1, 1933		\$1,525.41
Sales through Stechert	\$ 64.05	
Interest on Bonds	102.75	
Grant from National Academy of Sciences	650.00	
Dues, Members 1932	15.50	
Dues, Members 1933	310.00	
Dues, Fellows 1932	24.00	
Dues, Fellows 1933.	487.00	
Dues, Fellows 1934	6.00	
Dues, Fellows 1935	6.00	
		<hr/>
		\$1,665.30
		<hr/>
		\$3,190.71

*Expenditures*

Dues to American Anthropological Association	\$ 647.50	
Stationary	6.87	
Stamps	10.50	
Clerical Assistance	3.50	
Cost of Memoir XIV	1,031.32	
Travelling Expenses, Lecturers	12.91	
Foreign Exchange	.75	
Check Tax	.26	
Safe deposit vault	6.60	
	<hr/>	\$1,720.21
Balance in Corn Exchange Bank		1,470.50
		<hr/>
		\$3,190.71

## PERMANENT FUND

## Statement of Assets and Liabilities

<i>Assets</i>		<i>Liabilities</i>
3 N.Y. Mtg. Bond Co. Bonds (par value)	\$3,000.00	
1 U.S. Govt Bond	500.00	\$0,000.00
	<hr/>	
	\$3,500.00	
Net Assets Permanent Fund		\$3,500.00

Audited and Approved by GENE WELTFISH

## BOOK REVIEWS

### AFRICA

*Kultur und Umwelt der Kleinwuchsigigen in Afrika.* WILHELM IMMENROTH (378 pp., 1 map. Leipzig: Verlag der Werkgemeinschaft, 1933.)

This dissertation for a doctorate deals, as the title implies, with the culture and environment of 'small people' of Africa. The people of short stature are Pygmies and Bushmen, but in the former group the author includes, not only typical Pygmies of the Ituri forest, but many others of the southwest and the Sanga River, who, so far as their physique is concerned, show an admixture of Bantu Negro blood.

The book begins with an outline of historical references to Pygmies and Bushmen. The former are mentioned in early Egyptian texts, and the latter by Herodotus. The physical features of Pygmies and Bushmen are compared, and though data of physical anthropology are admittedly inadequate for such a task, the author might have presented the existing figures in a manner easier for comparative study. An article by B. Struck<sup>1</sup> appears to have been overlooked, yet Struck's consideration of cranial indices for many Bantu tribes of the Congo has a direct bearing on the theory of a wide pre-Negro distribution of Pygmy tribes over the central Congo region. Struck's data clearly show a strong tendency to brachycephaly among Bantu Negroes of central Africa, especially near Lake Chad, where several tribes have a cephalic index about 80. This brachycephalic element does not appear in other Negro tribes, who are for the main part dolichocephalic or mesaticephalic.

At the conclusion of the section on physical anthropology the data are divided into two portions, one relating to Pygmies and the other to Bushmen. A more effective presentation, since the object is a comparative study, would have been a collateral one in which Pygmies and Bushmen were considered trait by trait.

Pygmies are described with respect to ornaments, houses, music, hunting, social organization, character, speech, and religion. In the second part of the book the same headings (with the addition of art) are selected as captions for an outline of Bushman culture.

The comparative study is long delayed, but near the end of the book (pp. 351-54) the author indicates that he is impressed with differences rather than resemblances in physique, language, and culture, for though Pygmies and Bushmen are hunters they have basically different habitats.

The space given to comparative study is small compared with that devoted to assembling of data. One does not know to what extent Dr Immenroth had made his compilation before the publication of I. Schapera's work.<sup>2</sup> The essentials of data bearing on Ituri Pygmies have appeared in articles and in a book by P. P. Schebesta,<sup>3</sup>

<sup>1</sup> Versuch einer Karte des Kopindex in mittleren Afrika, ZE 54:51-113, 1922.

<sup>2</sup> The Khoisan Peoples of South Africa. London, 1930.

<sup>3</sup> Bambuti, die Zwerge vom Kongo. Leipzig, 1932.

and for purposes of comparative study a considerable amount of information was already assembled. This does not necessarily make the work of Dr Immenroth one of supererogation, since students may be helped by having two summaries of facts relating to Bushmen.

As a compilation the work is thorough, painstaking, and accurate. The bibliography is enormous, mention being made of about six hundred authors. The absence of an index is a serious defect in a book which is primarily encyclopaedic. I think there is no injustice in saying that the volume is hardly a dissertation in the generally accepted sense of the word, which usually implies personal acquisition of new factual material, or the presentation of an impressively new point of view.

WILFRID DYSON HAMBLY

*Arthropen des Wissens Forschungsreisen in Portugiesisch Guinea.* H. A. BERNATZIK.  
(2 vols. 140 R. M. Wien, 1933.)

Students of African ethnology are deeply indebted to H. A. Bernatzik and B. Struck for the first survey of Portuguese Guinea. The larger Portuguese territories of Angola and Portuguese East Africa have not yet been surveyed with a thoroughness that is commensurate with their size and ethnological interest, and Portuguese Guinea has been almost entirely neglected.

The first of the two large tomes gives a general survey of all the tribes and the salient points of their ethnology, and in this study the reader is assisted by an excellent tribal map. It is no disparagement to the scholarship of African ethnologists to say that many of these names are unfamiliar, so scant has been the information respecting Portuguese Guinea.

The second volume consists of photographic plates of the finest technique and the highest ethnological value. The colored plates are works of art, and airplane photographs of village planning show an ingenuous application of aviation to the study of facts that have been too often neglected. Photographs of this kind are supplemented by numerous outline drawings of huts, compounds, and buildings which are used ceremonially. All the internal arrangements are made perfectly clear.

Students of physical anthropology will find anthropometric tables and type pictures which are of inestimable value. Languages have yet to be analysed and described by Professor B. Struck.

A general introduction gives a clear survey of topographical details, climate, wild animals, staple crops, and domesticated animals; then the author begins a systematic survey of tribes, concerning each of which he gives data relating to social organization, religion, magic, economics, and handicrafts. The technique of handwork is admirably illustrated.

The principal tribe, the Balante, number about 86,876 people. Smaller tribes are the Kunante, Kassange, Banyun, Fulups, Nordbayot, Sudbayot, Pepel, Man-kanya, Bidyogo, and Mandyako.

Such a wide survey necessitates a brief discussion of each tribe, and students are left with the task of assessing for themselves the disparities and homogeneities

of the cultures described. Theories of historical development are never obtrusive, and the text is confined almost entirely to a succinct account of factual material.

The investigators were undoubtedly justified in their method of providing a general survey. This gives an intelligible background for ethnologists who may have the good fortune to attempt a detailed monograph describing the tribal life of some particular unit.

WILFRID D. HAMBLY

*The Early Cape Hottentots described in the writings of Olfert Dapper (1668), Willem ten Rhyne (1686), and Johannes Gulielmus de Grevenbroek (1695).* The original texts, with translations into English by I. SCHAPERA and B. FARRINGTON. Edited, with an introduction and notes, by I. Schapera. (xv, 309 pp., 7 plates. 10 shillings Cape Town: The Van Riebeeck Society, 1933.)

The Van Riebeeck Society has contributed a noteworthy volume to the literature of anthropology by publishing three seventeenth century works on the Hottentot. The original Dutch and Latin texts are presented together with English translations by Professors Schapera and Farrington. The English translations occupy the right-hand pages of the book, the original Dutch and Latin the left-hand pages. A fifteen page general introduction by Professor Schapera serves to orient the reader. Preceding each translation is a foreword which evaluates anthropologically the work translated. Copious footnotes add the finishing touch to this extremely valuable collection of source material. The frontispiece is from a photograph of an old Cape Hottentot man. Six plates reproduced from Kolb's *Caput Bonae Spei Hodiernum* of 1719 enliven the volume and portray various Hottentot customs.

E. W. GIFFORD

## OCEANIA AND INDIA

*The Native Music of the Tuamotus.* EDWIN G. BURROWS. (Bernice P. Bishop Museum Bulletin, 109. 107 pp., with music. Honolulu, 1933.)

Mr Burrows' first publication is exceedingly creditable. Eighty-three songs and chants out of a total of three hundred and fifty collected by Kenneth P. Emory in the Tuamotus were transcribed at the Bishop Museum and seventy of these were analyzed, the samplings being made partly in accordance with Mr Emory's advice. Forty-three specimens were chosen from Vahitahi, twenty from Fagatau, fourteen from Reao, and six from the western Tuamotus.

In addition to the assistance given him by Mr Emory and Mr J. Frank Stimson in the matter of their unpublished notes and personal advice, and by William K. Purves, instructor in music at the Kamehameha school, who assisted with the musical terminology and made the drawings of the music, Mr Burrows himself brought to the work a well-rounded viewpoint as a result of a year's study of the efforts of his various predecessors in the field of primitive music. The contributions others had made in the matter of methods of approach to the general problem, and



perhaps stressed unduly. Mr Burrows has handled impartially and with an attractive style.

The book is roughly divided into two parts. The first covers fifty-four pages and describes in a general way the varieties of songs, giving typical examples. Occasionally, special comments on the strictly musical peculiarities of the examples are appended. There is also a brief discussion of the part music plays in Tuamotuan life. The second part, which covers fifty-two pages, is devoted to a discussion of the various characteristics of the music itself: the tone quality, varieties of vocalization, rhythm, tempo, intensity, tonality, melodic movement, endings, part-singing, musical form, local differences, and European influence. There is no mention of musical instruments. On the whole, this general rather than detailed treatment is suggestive and interesting, particularly because the author, in what was necessarily a very hasty treatment, was obliged to look for the more general aspects and has characterized them aptly. Probably such a treatment would fill a real need for those seeking only a good general description of what a given music is like. Perhaps it also might be sufficient for an area like Polynesia, where the music, at least to superficial inquiry, seems to follow in general more circumscribed lines than those we are accustomed to observe elsewhere.

But even here, possibilities of variety in unexpected, perhaps even unguessed, directions, would seem to argue for as detailed examination as the material allows for, and indeed, in the present study, are provokingly hinted at. Mr Burrows has barely more than indicated a number of traits which obviously, from the material he has given, require more thorough investigation, and promise rich rewards. It is indeed regrettable that a study which obviously would have profited greatly in the hands of one as capable as he is, like many another done under Bishop Museum direction, had to be carried out in an exhausting race against insufficient time. He is fully aware of the further possibilities of investigation of certain aspects of this music; that his generalities are, for the most part, based only upon samplings of a much larger collection; and that a brief hearing of all the songs, without notation and analysis, is not enough to reveal many possible subtleties of form and style.

For future comparative work with the music of other regions, this study, while useful, will have to be supplemented by more detailed work. It is a pity that, having gone so far, Mr Burrows could not have been allowed ample time to make a thorough job of it, and it is only to be hoped, that with his present very good start, he will have the luck to succeed himself in further research in this same region.

HELEN H. ROBERTS

*Dictionnaire de la langue des Iles Marquises: Français-Marquisien.* MGR R. I. DORDILLON. (Travaux et Mémoires de l'Institut d'Ethnologie, 18. 598 pp. 87 fr 50. Paris: Institut d'Ethnologie, 1932.)

This volume is the second part (French-Marquesan) of the work already reviewed in the *AMERICAN ANTHROPOLOGIST* 35: 358, 1933. Like the first part (Marquesan-French) this volume has been improved from the original edition (Paris,

1904) by the addition of many idiomatic phrases and by the inclusion of some two thousand new words. Unfortunately, many others have been deleted which might with advantage have been retained as defined in the earlier edition. Although the work is monumental its technical defects are serious for neither the author's methods nor the ends he sought belong to the science of linguistics, as the Institut d'Ethnologie points out in a foreword to this volume. Mgr Dordillon was interested primarily in matters of religion and morality and in perfecting a means of communicating these to the natives in the local dialects of 1860 which have since undergone marked phonetic and semantic change. In this he has succeeded admirably, but the anthropologist will regret the absence of many words and phrases that would have elucidated the culture of the Marquesans of this period.

J. FRANK STIMSON

*Juyāṅg jīūi*. Nirmmal-kumar Basu (Pravāsī, 33: 804-809. 12 illustrations. 1340 [Bengali era = 1933].)

The Juang are a Kolarian tribe inhabiting the western part of Orissa, south of Bengal. Their eastern neighbors are the Oriyas.<sup>1</sup> Existing literature on the Juangs is so scanty that even an account in a popular Bengali magazine is of some value for the information it contains, especially as the author's object (p. 805) in sojourning among them was to study their language, which is somewhat similar to Kol-Khariyā.

Considering the language in which it is written it may be of interest to give English translations of certain passages which are of an ethnological nature.

Basu was told that monkeys would not come anywhere near a Juang village because of the latter's liking for them, presumably as food (p. 807). Then he writes Indeed the Juangs eat everything. On getting up in the morning the men go into the woods to chop or to fetch bamboos with which to make basketry, and the women go to gather fruits, roots, tubers and the eggs of red ants [pupæ?]. They are very fond of the red ants' eggs. Formerly the Juangs lived by hunting, but nowadays, since the forests have come under government jurisdiction, their plight is unbounded. Somehow or other by selling their basketry they manage to exist. . . . The villages of the Juangs are small. In some there are about ten houses [families], in others there are only two or three. . . . In each village there is a hut which is called majan or courthouse [bachelor's house?]. If guests or relatives arrive, they are quartered and entertained here. And in this hut their worship is held. All the unmarried men of the village must remain in the majan. If enemies should arrive suddenly they will call everyone, and take upon themselves the first blows of battle. . . . The majan is the center of Juang social life. Every evening, in the open space before the majan, the women dance holding each other's hands, while the men stand separately in front of them and keep tune by playing on the čangu [beating on the drum]. The Juangs believe that the first cause[s], Burām Burā and Burām Buri, live in the posts of the majan. Black hens are sacrificed to him. But he himself is powerful, and has his seat in the fire. The fire which burns continually in the pit inside the majan is through his doing [sic]. When the skin of the čangu [drum] is heated before the fire just before playing it, he comes into the drum; the sound of the drum is his voice (pp. 808-809).

Very little is said of their religious life. In describing a certain worship in which

<sup>1</sup> See my *L'Ethnologie du Bengale*, Paris, 1927, pp. 47 *et seq.*

Basu himself took part, he says that two black hens were sacrificed, and the blood sprinkled on the drum. Anyone may perform a religious service, the only qualification being that he must be married.

It is not that their life is a happy one. They have poverty, starvation, disease, oppression, yet they pass their days somehow by their evening dances and by drinking intoxicating liquors. They do not think of sorrow, they take it for granted (p. 809).

The two short Juang texts given show considerable Bengali influence, and it is questionable if Basu was successful in taking real Juang texts. It is a pity that he does not give any phonetics. The Bengali alphabet is hardly suitable for expressing the sounds of a different language. Nine of the twelve illustrations will be of value to anthropologists: they compare favorably with those given by Colonel Dalton and Sir Herbert H. Risley. Let us hope that Basu will publish something more detailed in the near future.

BIREN BONNERJEA

### AMERICA

*Atitlan, An Archaeological Study of Ancient Remains on the Borders of Lake Atitlan, Guatemala*. SAMUEL KIRKLAND LOTHROP. (122 pp., 74 figs., 9 tables. Carnegie Institution of Washington. Publication No. 444, September, 1933.)

Lake Atitlan is situated in the highlands of Guatemala, in the Department of Sololá, at an elevation of 6000 feet. Dr. Lothrop is chiefly concerned with the southern shore, territory of the Zutugil Indians.

Zutugil, Cakchiquel, and Quiché, the historic Indian tribes of the district, are of the same sub-group of Mayan linguistic stock. They were highly organized politically and socially at the time of the Conquest, when they were living in approximately the same regions where they are found today. There are adequate accounts of Quiché and Cakchiquel history, based on native and early Spanish documents, but the Zutugil have not heretofore been considered as a unit. Our only knowledge of them in pre-Conquest times comes from Quiché and Cakchiquel records, and is given in summary by Dr. Lothrop. According to the Cakchiquel, the Zutugil were the original settlers on Lake Atitlan; according to the Quiché, all three tribes came to Guatemala as one people, fifteen generations of kings (i.e., about 400 years) before the Conquest. Be that as it may, once settled, all three tribes devoted themselves to fighting each other, and united only once, at the end of the fifteenth century, to repel the Aztecs.

Two sites were excavated: one, Chukumuk, at the base of the volcano Toliman; the other, Chuitinamit, at the base of the volcano San Pedro. Adjacent sites were inspected, and a reconnaissance was made of several sites, some Zutugil, on the northern and eastern shores of the lake, in Cakchiquel territory. Appendix I contains notes on sites in the Quiché country, to the north and west of the Atitlan district.

At Chukumuk, which lies on a volcanic ridge, excavations were made at house sites on the ridge and also in a small valley to the north. A stratigraphic study of pottery established, with qualifications, three periods in the history of the site.

Levels of arbitrary depth show change in style of vessel rather than in ware from one period to the next. The identity of the middle level is checked by its agreement with the funeral pottery of a burial found at the same depth.

On the basis of shape, Dr Lothrop correlates Chukumuk I, the earliest period, tentatively with Zacatenco II and following "Early" cultures in the Valley of Mexico, and more positively with Holmul I, first pottery in the Peten district of Guatemala which can be accepted as classical Maya. Holmul I and Chukumuk I seem to derive in part from the postulated Q culture, an early blend of traits from the Valley of Mexico, South America, and an even earlier and as yet unidentified local culture.

The connections of the middle period, Chukumuk II, with the Peten, Copan, and southwestern Salvador, would place it, with Holmul V, at the end of the Old Empire. Allowing for a cultural lag in the highlands, Dr Lothrop would put Chukumuk II just after the end of the Old Empire, that is, just before the rise to power of the historic tribes of the highlands about 1100 A.D.

The third period, Chukumuk III, would cover the time from the end of Chukumuk II to the Conquest.

Chuitinamit, a rocky hill at the base of San Pedro, was the seat of the Atziguinibai, supreme chief of the Zutugil. Excavation here was hampered by objections of local authorities and landowners. Full publication of the pottery from this site is being held until the complex material can be studied further; it is merely outlined here. Nothing so far found, judged stylistically, indicates early occupation, and the pottery could be called roughly contemporaneous with Chukumuk III. It is surprisingly different from the pottery at Chukumuk, where Chuitinamit painted wares are for the most part lacking. This may merely be due to social differences, since Chuitinamit was a royal residence.

Summarizing, we deduce, mainly from a study of pottery, three main periods of occupation for the district around Lake Atitlan. The first, Chukumuk I, which may represent a population either primitive Maya or pre-Maya, contains non-Maya elements, also found to the south and east, which persist into the second period, Chukumuk II. The third period, partly typified by Chuitinamit pottery, covers the political ascendancy of the historic highland Maya tribes. While each period has, on the basis of shape, the Maya connections already referred to, most of the Atitlan pottery shows surprisingly little resemblance in ware or decoration to classical Maya wares of equivalent age. Architecture and stone carvings appear to owe little or nothing to the same classical Maya tradition. It seems then "that in the earliest known times the natives drew inspiration from western Salvador and to a less extent from central Mexico. At a later period they were in contact with the Maya Old Empire, and, in the centuries preceding the Spanish Conquest, they developed a culture of strongly local type."

This work is of very real value, not only as a contribution to Maya archaeology, but as an example of the growing importance of ceramic study in archaeological analysis. It is the first systematic publication of Maya pottery from the highlands of Guatemala, and includes statistical sherd tables, a summary of Maya-Mexican

ceramic chronology (pp. 57-60) and fresh definitions of the vexed and troubled terms ware, bevel, and molding.

MARY BUTLER

*La "Conquete Spirituelle" du Mexique.* ROBERT RICARD. (Travaux et Mémoires de l'Institut d'Ethnologie, 20. 404 pp. 125 francs. Paris, 1933.)

Without in any way depreciating the quality of this study, one may wonder why it was published in an ethnological series. It is true that for the specialist in Mexico the work has a certain ethnological value but it is primarily a historical treatise. As such it need not receive extended discussion.

The primary purpose of M Ricard was the study of the methods of the Franciscans, Augustinians, and Dominicans in converting the natives and the founding of the Mexican church. In so far as the first part of this purpose is adhered to, the work is of ethnological value. From this viewpoint, however, the work has two serious defects. M Ricard depends, in the first instance, far more on statements and discussions of policy and not enough on specific missionary accounts of what may be termed field methods. To do this would have required the sifting of an enormous mass of archival material. As one who has worked in the Mexican field somewhat, the reviewer can sympathise with M Ricard's failure to spend the several additional years necessary to do this. In the second instance the monograph stops in 1572 with the coming of the Jesuits, thus leaving us in the dark concerning a large portion of the north Mexican field. Contrary to M Ricard's statement, the Jesuits were intimately concerned with the conversion of the natives over a considerable portion of the north.

M Ricard discusses among other things—I touch only upon those points which may interest the ethnologist—the ideological similarities between Christianity and certain phases of native religions, the linguistic and ethnographic preparation of the missionaries, the descriptive works such as those of Sahagun and their failure to be disseminated among the missionaries. A point of interest to which he reverts on several occasions is that we owe the preservation of many of the Indian languages to the deliberate policy of the missionaries to prevent the Indians learning Spanish. The purpose of this was to avoid as far as possible any intercourse between Spanish and Indians. To further this end, Indians not on *encomiendas* were segregated in Indian towns and every effort made to prevent whites from living near or visiting such communities. This has important implications and bearings on the matter of the survival of Indian cultures.

Another point of interest is implied in the distribution of missions and missionaries. In 1570, according to the accompanying map, there were vast areas untouched by missionary effort. These regions included practically all the coastal sections. Furthermore, in an area with a native population of several millions there were, in 1559, a peak year in missionary efforts, a total of 802 missionaries. This figure included lay brothers, novices, students, professors, the aged and sick, and administrative officers. It is clear from this that the Indians in the main could never have been converted to Christianity beyond an acceptance of the superficial forms.

Another interesting point dealt with particularly in part II, chap. 5, is the introduction of the morality plays and the origins of several of the widespread modern dances such as Los Moros. There is also a discussion of pagan ideological complexes carried over into Christian ritual and some interesting discussion of some of the organized resistance to Christianity, which was partly motivated by ideas suggestively similar to the later Ghost Dance doctrine. Appendix I should be useful, being a bibliography of works in or about native languages published between 1524 and 1572.

RALPH L. BEALS

*Aus den Pyramidenstadten in Alt-Mexico.* WALTER LEHMANN. (8vo, 159 pp., 53 illus., 3 panoramas. Berlin: Reimar Hobbing, 1933.)

It is important to students of Mexican archeology that Dr Lehmann has set down in this book a section of the results of his travels and researches on the antiquities of our neighbors to the south.

Dr Lehmann apparently makes no distinction between the generally accepted conclusions of Mexicanists, well known historic narratives, and his own painstaking research. There are no foot-notes, no citations in this extremely readable and clearly presented narrative of Old Mexico. It is, aside from this rather pertinent criticism, a well written, factual presentation of Old Mexican history, archeology, and culture sequence. The illustrations are novel in form but exceedingly clear cut as to detail. The chapter headings are not numbered. Following a rather lengthy introduction, they cover the following subjects: General Archaeological Viewpoint, The Pyramids of Soncuicuilco, Cholula, Teotihuacan, Xochicalco, Mitla and Monte Alban, Papantla, Mexiko-Tenochtitlan, and a summarizing conclusion. There are 159 pages, including five pages of closely typed bibliography with the inclusion of the names of representative and outstanding American students. A pocket folder in the back cover includes an elaborate panoramic sketch of the ruins of Teotihuacan and of Monte Alban according to the late William H. Holmes, and a schematic chart of the elements of the Mexican calendar prepared apparently by the author.

Strikingly produced with excellent illustrations, the book is recommended as a popular account of the outstanding ancient remains of Mexico and can also be read with profit by students of culture.

WALTER HOUGH

*The Ruins of Holmul, Guatemala.* RAYMOND E. MERWIN and GEORGE C. VAILLANT. (Memoirs, Peabody Museum of American Archaeology and Ethnology, Harvard University, III, no. 2. 107 pp., 36 pls. and colored frontispiece, 31 figures. Cambridge, 1932.)

In this volume is published the record of the first thorough stratigraphic study of a Maya ruin. The ruin itself is remarkable as containing archaeological remains, burials, and pottery; and it was possible to chart the succession of these features,

and to link together those occurring within the same general period of time. Such a record deserves detailed review.

The name, Holmul, has been given to this "Old Empire" site which lies east of Tikal and very near to the British Honduras boundary. Like Tikal and Uaxactun, it is reached from Belize via the Belize river and the trails of chicle hunters through the forest. The ruin is important, although not in the class of the magnificent sites of Tikal, Copan, and Chichen Itza.

As a Peabody Museum project, the survey and excavation work was initiated by Dr Tozzer, its discoverer, in 1909-10. The following season saw the actual work of excavation with Dr Merwin in charge. Due to Merwin's loss of health soon after, and his death in 1928, his report was not finished and published. To complete this work Dr Vaillant of the American Museum of Natural History, New York, was enlisted as collaborator. Of the 96 large pages of text, 24 were written by Merwin and 72 by Vaillant. Tozzer and Vaillant give Merwin full credit for the planning and work of excavation, and for good and full field notes. Also Merwin's contribution to the text includes the detailed description of Building B, Group 2, which is the outstanding unit excavated. Gladly granting honors to Merwin for the bulk of the source material, it is very clear that the volume itself is Vaillant's. All the commentaries and the analyses of the architectural features are by Vaillant, and the latter half of the book is devoted to his discussion which thoroughly covers the entire situation at Holmul.

The survey and records of excavation showed three plazas of moderate size, and with each plaza is a high pyramid and temple, the altitude of the lowest being over fifty feet. Not a single dated stela was found to help date the city. No stratified rubbish heaps were found where successive layers containing fragments of homely kitchen pottery could tell the story of changes in culture. However, the excavation uncovered a series of graves, tombs, and stone buildings re-used as tombs whose discovery heralded the adoption of modern ceramic methods of study in the Maya field. In Vaillant's words,

Dr Merwin found at Holmul instead of a rubbish bed a series of graves richly equipped with pottery showing strong contrasts from period to period. A stratification of any kind is rare and of the greatest importance in Maya archaeology, but a superposition of such intrinsic value is unique.

Vaillant uses the burials excavated by Merwin as a basis for a time scale of five periods for this city, and names them Holmul I, II, III, IV, and V. He classifies the architectural remains (which are badly ruined) according to this same plan, an easy matter as their stratification is related to that of the burials. He finally studies the pottery found as burial furniture and classifies and describes it as follows:

Holmul I: Bowls with tetrapod support; bowls with concave bottoms; spouted pot forms; sparing use of complicated design forms, pot stands.

Holmul II: Transition into the basal form of composite silhouette bowl; appearance of scutate covers with animal heads, pot stands.

Holmul III: *First Phase*, absent. *Second Phase*, development of the composite silhouette

bowl with basal bevel; scutate covers with well modelled animal heads; few examples of polychrome design, virtual absence of the leg as a support *Third Phase*, fall of undecorated black lacquer and rise of polychrome decoration; scutate covers with effigy knobs in polychrome, simple forms of bowls *Fourth Phase*, tendency of polychrome pottery patterns to degenerate and simplify, rise of undecorated vessels and new forms, such as modelled effigy covers and low cylindrical jars; pot stands

Holmul iv: Continuance of degenerate polychrome patterns, and tendency for the sharply defined composite silhouette bowl with basal bevel to lose its clarity of outline.

Holmul v: New styles like tall cylindrical vase and flat bottomed bowls with cylindrical tripod support; use of glyphs and life forms as decorative elements.

These burials [to quote further] yielded a series of over 90 pottery vessels, which probably represents the cream of the ceramics made at Holmul. The vessels were probably used for serving food and for ceremonial purposes, but storage pottery, such as makes up the mass of the sherds in debris heaps, is lacking

However for comparative purposes, the lack of commonplace material is not a serious matter; as up to the present time, the principle Maya collections are composed of only the more striking vessels from various localities (a narrowness which the author repeatedly laments).

Among Vaillant's comments are the following:

The Holmul i pottery shows more southern affiliations than it does northern or western . . . Ceramically, Holmul i is insignificant . . . Through Holmul iii one sees the rise and decline of a ceramic style, a condition which might possibly argue for long continuance. . . . Holmul iv, architecturally and ceramically, drops the curtain on Holmul iii, even as Holmul ii caused it to rise . . . Holmul v ceramics reveal a much greater influx of new ideas than the pottery of the preceding periods. [Vaillant suggests that] we approach the close of the "Great Period" as the time of the Holmul v emanation

Vaillant was the pioneer in intensive study of Maya ceramics following the principles used by Kidder and others in the southwestern United States; and these quotations should give an idea of the scope and value of this volume. Inasmuch as Vaillant's chief work, "The Chronological Significance of Maya Ceramics," is available only to those who can consult the manuscript, the present volume discussing part of the same material is of especial value.

The memoir with its large pages and generous quota of plates is in keeping with the other numbers of the Peabody Museum Memoirs.

This book reflects interestingly the present situation regarding the methods of publishing ceramic data. The archaeology is soundly presented, the record of the stratigraphy is very clear, and the descriptions and illustrations of vessel shapes and decorations are excellent to the point of impressiveness. On the other hand, the descriptions of the texture as revealed by the broken sherds and of the material in the pottery are extremely difficult for the non-ceramist to grasp and visualize. It is regrettable that no clear method of description of the composition of the wares themselves has yet been worked out, as in this department only does the work fall short of a rounded presentation for the general anthropologist. To the reviewer, it would have been both interesting and helpful to have had a single color plate show-



ing fractured sections of typical sherds of each period enlarged as they would appear under a powerful reading glass.

LAWRENCE ROYS

*Grammar Notes and Vocabulary of the Makuchi Indians of Guiana.* REV JAMES WILLIAMS. (Anthropos Internationale Sammlung linguistischer Monographien, VIII. 413 pp. St. Gabriel-Modling near Vienna, 1932.)

In this volume the Rev James Williams tells of his own stay (1908-1913) among the Makuchi, his debt to his predecessors, the habitat of the Makuchi; he then gives a full bibliography, a sketch of the grammar of the language, and a vocabulary. It is most difficult for one who has no first hand knowledge of the language to appraise the linguistic value of this book, save to point out that anything on South American linguistics is most welcome. Yet, even at the risk of being considered presumptuous, I feel constrained to say that judging from what I have heard concerning the little that has been gathered in South America by trained scientists within the past few years (Kechua and Botocudo) and which is not yet published, the phonetics and morphologic description are hardly adequate. What we need in South American linguistics are collections of texts (not translations from European languages), analytical grammars (not based on Latin grammar) referring to these texts by page and line, and a comparative study of related dialects. Only in this way will it be possible to determine what the South American linguistic stocks really are. It is not too much to say that South American linguistics are not yet on a level with those of United States and Canada. But after all it is the business of missionaries "to save souls," not to conduct anthropological or linguistic researches. This is not to depreciate the efforts of missionaries on these last lines, for the ethnological studies of Gusinde and Junod alone would show what splendid work they can do. And in my opinion both Cuoq and Lacombe had a better grasp of some important grammatical traits of Algonquian languages than the late Dr Jones, though their arrangement of their material was perhaps not very happy, for what clearly belongs in grammar is placed often in vocabulary and vice versa. The appendix on the Farabee controversy, irrespective of who is right, is quite out of place. This is not to say that it should not have been published at all, for I believe it should, but that it is uncalled for in the present volume. Summing up, I repeat that any contribution to South American linguistics is most welcome.

TRUMAN MICHELSON

#### PHYSICAL ANTHROPOLOGY AND MISCELLANEOUS

*The Eugenic Predicament.* S. J. HOLMES. (xi, 225 pp. \$2.00. New York: Harcourt, Brace, 1933.)

This volume is penned by the Cautious Eugenist who is endowed with a faculty for clear and convincing exposition and a fine sense of the value of words. The preface itself gives a succinct synopsis of the aim and argument such as one rarely meets

in prefaces, and a fine illustration of the mastery of telling phrase is to be found in the second paragraph of page x. The title betrays the author's imaginative clarity, for predicament is a word bristling with implications and subtly suggesting that fable in which the porcupine makes his home in the snakes' narrow den.

Essentially the volume is a study of relevant facts, presented in a manner which recognizes the reader's intelligence without requiring from him a scientific equipment beyond his experience. And by the time the reader has reached the foot of page 54 he will have a real conviction of how to assess rival claims on this very difficult subject.

Having grasped the reasoning of why feeble-mindedness can be hereditary without apparent expression in parent or grandparent, he is ready for his next lesson.

There is a very fine presentation of the effect of environment (e.g., p. 24) in bringing into evidence a hereditary constitutional debility. But in sketching certain hereditary defects (p. 13) and diatheses (p. 104) there is no reference to the growing success of preventive medicine, which, recognizing these deviations, bends its energies toward keeping them below the threshold of expression. The increasing complexity of modern culture thrusts into the limelight many a hereditary failing which would never have quickened into social significance but for the impact of environment. Professor Holmes tells a story vivid enough without references to taints of such dubious origin as nightblindness, nystagmus and asthma. Even so definitely heritable a condition as haemophilia need not now have the terrors which it invoked before the fairy touch of endocrine treatment became possible.

There are passages of disarming cogency and prophetic wisdom (e.g., pp. 112, 148, 158) and evidence is marshalled (e.g., the quotation from Galton, pp. 62-63) with skill the more effective because the pleading is just and sincere.

But snakes though we be we have come to suspect the porcupine which even makes the author squirm (p. 124). There are moments in all writing when fatigue and unwariness induce loose statements (e.g., pp. 13, 29, 69) and even though facts be correctly stated and arguments be sound, their effect is reduced by the irritating dialectic (e.g., pp. 76-79, 121-23) of an "uplifter" who feels himself, however unnecessarily, an object of scorn and opprobrium. In a second edition, which certainly should be required, Chapter VI could be reduced to pp. 148-49 with much profit to the cause of eugenics.

As for giving practical expression to eugenics, the author puts forward several tentative suggestions, but without conviction, for he is not compelled to set his hand to this in his daily work. Perhaps preventive medicine has already made a more considerable attack on the problem than the author realizes. Nevertheless Professor Holmes concludes a most valuable and readable survey of the problem of eugenics by a sure prophetic touch. The contribution of the biologist to our social fabric is unremitting toil in educating the public to the facts of biology for which Professor Holmes himself has so marvellous a gift.

T. WINGATE TODD

*Rassenkunde und Rassengeschichte der Menschheit.* EGON FREIHERR VON EICKSTEDT. (viii, 944 pp., 613 illus., 8 colored maps. Unbound, M. 72.50, bound, M. 76.50. Stuttgart: Ferdinand Enke, 1934.)

The study of individual and group behavior under hereditary and environmental stress, phenomena of breeding and crossbreeding, blood-relationship and eugenic hygiene, has brought to light such a mass of information that the science of Physical Anthropology has essentially gained also under these rarifying trends and aspects. Human evolutionary and racial history, as well as that of racial relationship, have inspiringly felt this new impetus which has brought forth a comprehensive array of valuable literature and fructified in the establishment of institutes of human and racial biology in various parts of the world (Berlin, Uppsala, Yale University, etc.).

It is on such similar broader and deeper concepts that von Eickstedt's work, here under review, was planned and achieved. Published in six instalments and comprising 950 pages, it came to conclusion toward the end of 1933. Beginning with (I) a general introduction on the foundation of racial history, the origin and development of humanity, the following divisions (II-V) treat of the racial conditions in Asia, Europe and Sahara, Negrid Africa, Oceania, and the two Americas, while the last division (VI) contains a summary and racial pre-view as well as a comprehensive register of authors and subjects. The saliency of von Eickstedt's representation of his subject is an outspoken motility, i.e., on the basis of concrete and verified facts, factors and principles of organic and, in the specific case, racial evolution, the mass and differential development of extinct and recent man. Tracing in this manner human natural history into its incipency, there is on the other hand, a following-up of human florescence through the multifarious main phases into the present highly complex status. Not only does this refer to groupings in general and idiovariational, orthogenetic straining of types, "Parallelvariationen," and so forth, but also to the disentanglement of hybrid groups and forms. Of particular interest in connection with the habitus of the major divisions of mankind and their geographical distribution, are the detailed discussions of the "biodynamic" agencies in the procreation of those divisions, agencies which to the biologist are known as environmental and which in their complexity are closely dependent on the specific milieus.

We are accustomed to von Eickstedt's keenly conceived theories of racial grouping, which in virtue of the subject frequently have to rely on hypothetical concepts, but it is his courageousness and analytical sagacity, his never failing resourcefulness and, last but not least, his diligently gathered knowledge in the vast open as the head of several expeditions, which are so pleasing and conducive to further research. The execution of the book, copiously illustrated, is all an exacting critic could wish for.

BRUNO OETTERING

*The Long Road from Savagery to Civilization.* FAY-COOPER COLE. (xi, 100 pp., illus \$1.00. Baltimore: Williams and Wilkins Company, 1933.)

A brief, attractive resumé of human history. Intended for the general reader,

and issued in connection with the Chicago Fair, it may be recommended for secondary-school libraries.

No booklet of this sort is intended to be novel in viewpoint. Interpretations here are cautious. Inevitably there are points on which opinion will differ (the antiquity of *Sinanthropus*, the scanty food supply of the North American plateaus, e.g.), but decision was necessary in so small a book. The presentation is well-balanced and graphic.

LESLIE SPIER

## SOME NEW PUBLICATIONS

### *North America*

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## DISCUSSION AND CORRESPONDENCE

### ESKIMO ARCHAEOLOGY AND SOMATOLOGY

In *Human Biology* for September, 1933 (pp. 313-70), Dr Carl C. Seltzer has presented some new and important data bearing on Eskimo anthropometry: "The Anthropometry of the Western and Copper Eskimos, based on Data of Vilhjalmur Stefansson." The paper makes available measurements on 526 adult Eskimos from northern Alaska and the Coronation gulf region obtained by Stefansson from 1906-12. The author's presentation of the data is admirably clear and concise and his demonstration of the relationships between Stefansson's six Eskimo groups is sound and convincing. However, it is not my intention to discuss here that part of the paper dealing with the measurements themselves or the immediate conclusions derived therefrom but rather to comment on the author's broader conclusions and particularly on his interpretation of the archaeological evidence.

Dr Seltzer recognizes that archaeology, ethnology, and ethnography have as important a bearing as somatology on the problem of the origin of the Eskimo and that "it is essential that we bring to bear all the evidence we have in order to solve this perplexing problem." With this view all will agree, but it cannot be said that the author's consideration of the cultural evidence achieves his expressed intention "to correlate the physical evidence concerning the Eskimo with the known facts of material culture. . . ." The correlation consists of examining "the somatological evidence for the Thule and Eschato-Eskimo cultures," the last two of Birket-Smith's four hypothetical stages of Eskimo culture. Having determined the physical types associated with these two culture stages, their relations one to another and their respective rôles in the formation of the present Eskimo population, Dr Seltzer feels that he has solved the problem of the immediate origin of the Eskimo. It is my contention that these determinations, necessary as they are for a final solution of the problem, would be no more than an initial step in that direction, provided they were arrived at correctly; furthermore, it is my belief that even this last requirement has not been fulfilled in Dr Seltzer's attempt to correlate Thule culture and physical type.

Since the skeletal material obtained by Mathiassen from Thule sites in the Hudson bay region has not been published, Dr Seltzer has turned to Alaska for his Thule material.

What were the physical characteristics of the bearers of this [Thule] culture was not known, until fortunately, in 1918, Van Valin discovered a group of mounds near Point Barrow, Alaska, which contained a series of skeletal remains associated with artifacts of Thule type. That this culture belonged to the Thule people is a fact that has been adequately and conclusively demonstrated by Mason\*. And further, that this was a historically ancient site is attested to by Van Valin, who on questioning the present inhabitants of Point Barrow, found

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\* Excavations of Eskimo Thule Culture Sites at Point Barrow, Alaska Proc 23rd Internat. Cong Amer 1928, pp 383-394.

that they had no historical recollection of the existence of any previous group in this region, or that these mounds were actually "Igloos."

These important skeletons were measured in 1928 by Hrdlička† who came to the conclusion that the bones of the Old Igloo Thulers were the remains of Eskimos whose physical type differed radically from groups now living in Alaska. On the basis of his report, the skeletal remains are distinguished by the great length and extreme narrowness of their skulls, with consequently low cranial indices, and also by their excessively high breadth-height indices. In short, the Old Igloo Thulers were described as a tall statured, dolichocephalic, orthocephalic, akrocephalic, hypsiconch, leptorrhine group (p. 356).

Since some of the most important conclusions in Dr Seltzer's paper depend upon the acceptance of this skeletal material as Thule it will be well to examine the cultural evidence on which such an identification was based. Twenty-nine of the thirty-one harpoon heads from the Van Valin collection are classed by Mason as "Thule" because, like the Eastern Thule harpoon heads, they are thin, have an open socket, and a line hole running directly from side to side. However, these are what might be termed generic features: the Van Valin heads possess in addition bi-, tri-, or quadri-furcated asymmetrical spurs and two stone side blades or one side blade with an opposite barb—specific features which quite remove them from the Thule and place them with the Birnirk harpoon heads. This typological distinction is borne out chronologically. Stratigraphic excavations by Jenness at Bering Strait, by the writer on St. Lawrence Island and by James A. Ford at Pt. Barrow have shown that harpoon heads with side blades and divided spurs—whether of Old Bering Sea or Birnirk types—occur at lower levels than the Thule types.<sup>1</sup>

The same is true of the "winged" needle cases: those figured by Mason are not of the stylized Thule type—which differs very little from the modern Eastern type—but fit in with the more variable forms of the prehistoric Alaskan cultures: Old Bering Sea, Birnirk, and Punuk.

Mason lists a number of non-Thule elements from the Van Valin collection. In addition, Ford's excavations at Birnirk, which belongs to the same culture stage, have revealed a further number of such elements, some of which are identical or closely related to Old Bering Sea types from St. Lawrence Island and Bering Strait.

The eleven other types from the Van Valin collection which Mason lists as Thule do occur in the Eastern Thule finds, but they *also* occur at the modern Barrow sites. Furthermore, these or other modern north Alaskan sites yield a number of typical Thule elements which have not been found at any of the oldest Alaskan sites. These include such important features as pictographic art, soapstone lamps, rivet holes at the tips of harpoon heads, drilled lashing holes around the socket, ivory

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† Anthropological Survey in Alaska. 46th An. Rep. Bur. Am. Ethn. 1930, pp. 318-329.

<sup>1</sup> Archeological Investigations in Bering Strait. Nat. Mus. of Canada, Bull. no. 50. 71-81, 1928. Ancient Culture of St. Lawrence Island, Alaska, Explor. and Field-Work of the Smithsonian Inst. in 1930, 135-44. Prehistoric Eskimo Culture on St. Lawrence Island, Geog. Review XXII, no. 1, 107-19, Jan. 1932. Archeological Investigations at Point Barrow, Alaska, Explor. and Field-Work of the Smithsonian Inst. in 1932, 45-48.

bird figures, and objects pertaining to dog traction. In short, the Thule culture of the central regions is much nearer to the modern or barely prehistoric phases of Alaskan culture than to the prehistoric Old Bering Sea, Birnirk, or Punuk phases. How are we to account for this condition? If the Thule culture has an antiquity even approaching the thousand years assigned to it by Mathiassen, the only satisfactory explanation would seem to be that the elements last mentioned (pictographic art, soapstone lamps, etc.) were brought to northern Alaska within the past few centuries by a return migration of Thule peoples from the eastward, subsequent to the original eastward spread of the Thule culture, a suggestion which has already been made by the writer<sup>2</sup> and by Miss Frederica de Laguna.<sup>3</sup>

The cultural evidence, therefore, points to the modern north Alaskan Eskimos and their immediate predecessors as the most likely "bearers of the Thule culture" in Alaska. In the Van Valin skeletons, on the other hand, we have a sample of an earlier population, the age of which is not known, although it was in part contemporaneous with the Old Bering Sea culture, the oldest thus far known from Alaska. Since the identification of the Van Valin material as Thule is at variance with the archaeological evidence it follows that the attempt to trace the Thule culture eastward on that basis serves only to complicate an already involved problem.

A further weakness appears in the unqualified acceptance of Mathiassen's view that the Thule culture is the oldest in the central regions: "... it is a well established fact that archeologically the Thule Culture is the oldest in the eastern and central regions, the other cultures being superimposed upon it" (p. 367). The discoveries of Jenness and Wintenburg in the Hudson bay region and eastern Labrador make it appear as highly probable that in these regions the Cape Dorset culture was earlier than the Thule.<sup>4</sup>

It is a curious fact that, in his attempt to determine the physical type associated with the Thule culture, Dr Seltzer should have disregarded the one Thule group for which measurements were available: namely, the Sadlermiut of Southampton island in Hudson bay, who became extinct only in 1902, and who have been recognized by Mathiassen as the last of the Thule Eskimos in the central regions.<sup>5</sup> In 1910 Hrdlička published measurements on nine male and five female skulls collected by Capt George Comer from old stone graves on the south coast of Southampton island.<sup>6</sup> From this evidence it appears that these Central Thule Eskimo, instead of being strongly dolichocephalic like Van Valin's pre-Thule group from Barrow, had shorter

<sup>2</sup> Prehistoric Art of the Alaskan Eskimo, SI-MC 81, no. 14: 43, 44, 46, 1929.

<sup>3</sup> A Comparison of Eskimo and Palaeolithic Art, Amer. Jour. Arch. XXXVI, no. 4: 489, 1932.

<sup>4</sup> A New Eskimo Culture in Hudson Bay, Geog. Rev. XV, no. 3: 428-37, July 1925. Ethnological Problems of Arctic America, in "Problems of Polar Research," Amer. Geog. Soc. Special Publ. no. 7: 167-75, 1928. The Problem of the Eskimo, in "The American Aborigines, their Origin and Antiquity," 373-96 (University of Toronto Press), 1933.

<sup>5</sup> Archeology of the Central Eskimo, 1: 286-87 (Copenhagen), 1927.

<sup>6</sup> Contribution to the Anthropology of Central and Smith Sound Eskimo, AMNH-AP V, pt. 2: 177-280, 1910.

and broader heads and broader faces, features more characteristic of the modern Alaskan type. Hrdlička says: "Taking everything into consideration, it appears that in the totality of their features, the Southampton Island crania approximate the more Western, particularly Alaskan, rather than the more Eastern Eskimo" (p. 183).

Hrdlička also found close resemblances between the Southampton island and Smith sound crania:

These data demonstrate an unexpectedly close affinity in all the principal features between the Southampton Island and the Smith Sound crania. There are certain differences, but these are of minor character and are all well within the limits of individual variation. This material leads to the conclusion that there exists a close parental relation between the Eskimo of the two regions (p. 277).

This physical resemblance assumes added significance in view of the striking cultural resemblances between the two groups which were first pointed out by Boas and Wissler and from the further fact that both groups have been shown by Mathiasen to have had their origin in the Thule culture. I do not mean to imply that the physical type associated with the Thule culture is thus settled on the basis of the scanty Southampton island and Smith sound material now available. Until the skeletal material collected by the Fifth Thule Expedition is described this important question must remain in doubt. I merely wish to point out, as Mason<sup>7</sup> has already done, that there is a fairly consistent agreement in the cranial and facial characteristics of those Eskimo groups whose culture most closely resembles the Thule, i.e., Southampton island, Smith sound, modern Point Barrow and Point Hope. On the basis of the existing evidence, therefore, there is more reason for supposing that the physical type of the Thule culture is exhibited by these groups than by Van Valin's pre-Thule group from Point Barrow.

Upon leaving the problem of the Thule culture, Dr Seltzer proceeds to discuss that of the "Eschato-Eskimo cultures" and comes to the conclusions that (1) some of the Copper Eskimo and the Alaskan Eskimo from Point Hope southward to Bristol bay "are the descendants of an invasion of people resembling the Athapascans of Chipewyan stock" and (2) that the advance of an "Indian stock resembling the Algonkian Cree" has profoundly influenced the physical type of the Eskimo of Hudson bay, Labrador, Baffin land and Greenland. Dr Seltzer feels that the tracing of these two streams of Indian influence, both superimposed on the earlier Thule culture, reconciles the two previously conflicting theories of the immediate origin of the Eskimo, bringing them "*en rapport*" to form a new and complete picture." Without attempting to pass judgment on the details of the picture, I wish merely to express a doubt as to its completeness.

The past few years have witnessed a greatly increased interest in the problem of the Eskimo and the inauguration at last of the archaeological investigations so necessary for its solution. These investigations have advanced our knowledge of Eskimo prehistory beyond all expectation, but critical appraisal of the results shows

<sup>7</sup> *Op cit.*, pp. 391-94

that what has been accomplished is in reality a defining of the problem. Some of the components that will enter into the final picture have been determined but others of equal or greater importance remain to be traced out. The problem of the immediate origin of Eskimo culture will not be solved until we know whether or not the Thule culture represents the earliest stratum in Greenland; until the exact relationship of the Thule and Dorset cultures has been determined; until the gap between the pre-Thule stage at Point Barrow and the developed Thule culture as represented at Nauyasuk and Malerualik has been closed; until we have determined the immediate origin of the Old Bering Sea culture and have more precise information as to its relationship with the Birnirk; until we know the extent of the relationship between the Punuk culture and that of west and southwest Alaska, the archaeology of which is entirely unknown; and until the northerly affiliations of the ancient Kodiak and Cook inlet cultures have been traced.

When we turn to the problem of the racial origin of the Eskimo the desiderata are even greater: the available skeletal material from Greenland is for the most part undated; nothing whatever is known of the physical type associated with the Dorset culture, and the same is true of the earliest known stage of the Thule culture in the central regions; of the great body of Athapaskan speaking peoples stretching from Alaska to Hudson bay there are comprehensive measurements on only one group of Chipewyans; except for three crania from an Old Bering Sea site on St Lawrence island, the physical type associated with this apparently basic western Eskimo culture is unknown; and no skeletal remains more than a few centuries old have been found in the entire region from Norton sound southward to Bristol bay. The problem is one of great depth and wide ramifications. In clearing up its more immediate aspects, measurements on the living are essential, but I venture to say that basic results are not to be arrived at from this approach. We cannot avoid the fact that the existing anthropometric data on the living Eskimo are decidedly unequal in value. Measurements on groups of from 3 to over 600 individuals, rarely accompanied by photographs, recorded by twenty different observers from 1824 to 1928, taken under varying conditions and with different techniques, leave much to be desired. Furthermore, the highly important question of racial purity, where there is the ever present possibility of recent Indian, White and even Negro admixture, calls for the judgment of a skilled and experienced observer. Most of these inherent difficulties disappear with prehistoric skeletal material, provided it has been collected systematically. On the whole it would seem safer to accept most of the data on the living provisionally, withholding final conclusions until adequate skeletal material is available.

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#### THE GALLA OF EAST AFRICA

In his article "Peoples of Egypt" in *Ancient Egypt* (Part III, 1931), Sir Flinders Petrie stated that the Galla, a people now in southeast Africa, came down the Nile

and established themselves at Qau where they founded the Tenth Dynasty of Egypt. This event took place after two dynasties of Sudanese origin, viz. the Third and Fourth.

During the course of some historical researches which I am making regarding Semitic influences upon the peoples of East Africa by immigrants from Arabia, I found the following references to the Galla and allied folk.

Ibn Sayd, the geographer who died in 1286 A.D. and whose work is lost but cited to us by Abulfeda wrote: "north of the Sahartas country between the Nile and Red Sea are the Khassa, an Abyssinian race of ill fame. These people mutilate their captives and exhibit these genital parts as trophies." Early in the nineteenth century M d'Abbadie wrote that this was a Galla custom and had been copied by both the Abyssinian Christians and Moslems. The Zendj are described by Ibn Sayd as the darkest of the negroes, they fight mounted on oxen and adore idols. Father Lobo visited the country during the seventeenth century and described these people, then at Melindi, as Galla, an equestrian race. James Bruce, who lived in Abyssinia during the eighteenth century, described the Galla as a great confederation of tribes from southeast Abyssinia who invaded that country about 1559. This was probably the result of pressure on the coast by the Moslems and Portuguese.

Dr Krapf who travelled extensively in Abyssinia has described the pigmies (Dokos) of Kaffa and Susa, who may be relics of the pigmies of Punt alluded to in the records of the first six Egyptian dynasties. He stated that the Galla, an equestrian people, called themselves "Oroma," i e., men (similarly to the ancient Egyptians) and that the word Galla was the Arabic for immigrant. It is quite possible that Galla is an Arabic generic term similar to Hameg and has no tribal or definite ethnic signification.

It is therefore not improbable that the Kassu of the ancient Egyptians, Meroites, and Axumites are identical with the ancestors of some of the people who eventually coalesced with local inhabitants and became the Galla of the Arabs. There are grounds for such a theory, as Kassala is considered by some authorities to be the old original native name, and not Taka, for the district now known as Kassala. Begemdar in Abyssinia is said to be literally Dar Begem, i e., country of the Bega, an autochthonous race who seem to be prominent in Egyptian and Sudan history under various names from the earliest times.

ARTHUR E. ROBINSON

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#### TRANSPORTATION BY MIGRATORY ANIMALS

A recent article in *Science News Letter*, which may not have been seen by most archaeologists since it was put under the head of "Ornithology," brought to my attention an interesting possibility and an explanation for certain otherwise inexplicable finds. To verify my impression that this possibility had never before been advanced as such an explanation, or if so was generally forgotten and neglected, I put the following hypothetical case to many of my colleagues: "Suppose you found in

an indubitably undisturbed burial a typical and unquestionably identifiable projectile point from a remotely distant region, what explanations would occur to you?" The only explanations advanced involved migration, trade, or other terrestrial or maritime transportation by human means. I therefore considered my impression verified.

The article above referred to (*Science News Letter*, February 10, 1934) reported the finding of an Eskimo bone arrowhead like those used by the natives of St Lawrence island in a duck killed in California, and refers to several similar occurrences in other regions. The details of these instances do not matter, but the import matters greatly. Such cases of transportation of missiles must have occurred many times in aboriginal days. A weapon of strange type found in a migratory animal would have been prized and cherished by the finder as a powerful fetish and probably buried with him to the consternation and confusion of modern archaeologists. I need not go much deeper into the possibilities; they would not be confined to migratory birds, but would apply also to marine animals such as whales, seals, fish, possibly to terrestrial animals such as caribou, or to any animal whose migratory habits would carry a single individual for large distances and across cultural boundaries. The size of the missile carried would vary with that of the animal and, in the case of large animals, might be very great. That found in the mallard duck is said to be  $9\frac{1}{2}$  inches long. It was, of course, buried in the flesh of the bird, not found in the craw, though the latter possibility might also theoretically occur in other instances.

The number of such finds could not be great, but even one would be puzzling and demand explanation. Possibly this apparently new but perfectly logical explanation will give solace to some of us who, in such cases, would refuse to accept the obvious implication of far-flung migration or trade even in the absence of a better solution. And in other similar sporadic cases to which the present solution could not apply, I feel that we are justified in rejecting obvious, but to us untenable, explanations, confident that eventually some other simple but at present unthought-of hypothesis will be advanced.

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#### THE METHOD AND THEORY OF ETHNOLOGY: AN ANSWER TO R. R. MARETT'S REVIEW

TO THE EDITOR:

Mr Marett has been kind enough to review my small book on *The Method and Theory of Ethnology* in an exceedingly critical manner, but he seems to have completely forgotten that my essay likewise was an avowedly critical one. I might even go farther, and say that he has forgotten the entire contents of my book. If he finds it difficult, as he says, to recognize his colleagues from my description of them, I



must confess to finding it equally difficult to recognize my book from his review of it.

At bottom, however, it is really immaterial whether my definitions of "ethnology," "scientific," "historical," and so on, conform to Oxford usage or not. No one should have the slightest difficulty in determining what they are. And that, in the last analysis, is all that matters.

I would indeed be a Don Quixote if I thought that windmills would cease revolving merely because I tilted against them. But at times it is of value to tilt against them simply in order to call the attention of the world to the fact that they are present and are revolving "in their own sweet way" and that they will continue to do so "as long as the spirit of Man bloweth where it listeth."

PAUL RADIN

## NOTES AND NEWS

THANKS ARE DUE DR ROBERT H. LOWIE for having served as editor of the first number of this year's AMERICAN ANTHROPOLOGIST.

### HANDBOOK OF SOUTH AMERICAN INDIANS

An informal conference to consider the feasibility of preparing and issuing a handbook of South American Indians, comparable to the "Handbook of American Indians North of Mexico," was called by the Division of Anthropology and Psychology, National Research Council, at the University Museum, Philadelphia, January 6th. In attendance were Cooper, Jayne, Lowie, Mason, Osgood, Poffenberger (*chairman*), Sapir, Spier, Swanton, and Wissler. The opinions being generally favorable, a committee (Cooper, *chairman*, Sapir, Spier) was selected to draft a statement of the sentiment and suggest further action. This committee will be a subcommittee of a larger one appointed under the Division with the general title "Committee on Handbook of South American Indians," and consisting of the following in addition to those present at the conference: Bennett, Dixon, Herskovits, Kidder, Kroeber, Lothrop, Olson, Petrullo, Speck, and Stirling.

### A NEW PERUVIAN SITE

Late in 1933 Dr Julio C. Tello announced the discovery of an important new archaeological site in Peru in the Valle de Nepeña, north of Lima. Partial excavation in this extensive group of ruins revealed thick rectangular stone walls, with faces elaborately carved and painted in polychrome. In general the remains correspond to those found by Dr Tello on the eastern slope of the cordillera at Chavín de Huantar on the Marañón river.

TWO NEW INSTITUTIONAL SERIES have recently made their appearance: Anthropological Papers of the University of Texas, with an initial paper by J. E. Pearce and A. T. Jackson, A Prehistoric Rock Shelter in Val Verde County, Texas (published as University of Texas Bulletin, no. 3327, 1933), and Studies in Anthropology (University of Oregon Publication IV, no. 3, 1933), with L. S. Cressman's Contribution to the Archaeology of Oregon: Final Report on the Gold Hill Burial Site.

### ACTIVITIES OF THE UNIVERSITY OF ADELAIDE IN 1933

Under the auspices of the Board for Anthropological Research at the University of Adelaide and the South Australian Museum a party was organized to undertake an expedition in May and August to the natives of the Musgrove ranges in the northwest of South Australia. The scientific personnel included Professors J. B. Cleland, T. Harvey Johnston, C. S. Hicks, Drs Cecil Hackett, H. Gray, and H. K. Frey, with Messrs N. B. Tindale, J. O'Connor, and H. M. Hale. Data were secured on anthropometric and physiological traits, sociological and ethnological topics, as well as vocabularies.

Linguistic work of the University covered (1) a dictionary of the Aranda language (central Australia) by C. Chewings, N. B. Tindale, and J. A. Fitz Herbert, and a grammatical study by T. G. H. Strehlow; (2) texts and grammatical analysis of Worora (northwest Western Australia) by J. R. B. Love; (3) songs and texts of Tangane and other nearly extinct coastal languages of South Australia by Professor Davies and Mr Tindale.

FIELD WORK OF THE PEABODY MUSEUM, HARVARD UNIVERSITY,  
IN 1933

During the past year the Peabody Museum and the Division of Anthropology of Harvard University had ten expeditions in the field. The second Harvard Archaeological Expedition to Ireland, led by Dr H. O'Neill Hencken, excavated a large stratified island settlement of the first nine centuries A.D. Mr Conrad Arensburg continued his studies of the social anthropology of County Clare. Dr Carleton S. Coon sailed for Arabia last July to gather material upon the physical anthropology of the eastern and southern tribes. Mr John L. Gillin returned from an eight months' study of the Caribs of the Barama river basin, British Guiana. Mr Frederick Johnson spent his second winter with the Guaimi Indians of Panama. At Cocle, Panama, the Museum conducted its third season of excavations at Sitio Conte, directed by Dr Samuel K. Lothrop. Objects of gold and carved bone and stone were recovered as well as large quantities of strikingly decorated pottery. Mr John O. Brew continued his search for early Pueblo and Basket-maker cultures at Alkali Ridge in southeastern Utah. To provide an additional check on the cultural sequences sought by Mr Brew, Mr Douglas S. Byers was sent to Floating House Ruin in the Chinle valley in northeastern Arizona where he secured a sequence of super-imposed cultures from Basket-maker to Pueblo III. Mr Mischa Titiev conducted an ethnological study of the Hopi of Arizona. Mr James M. Andrews has left for ethnological studies in Siam.

The Division of Anthropology installed and operated a model anthropometric and statistical laboratory at the Chicago Fair.

The research work in the Museum included Dr Gordon T. Bowles's studies on his field work in China and eastern Tibet, Mr and Mrs C. B. Cosgrove's work on the caves excavated near El Paso; Mr Emil W. Haury's study of the material from the Mary Hemenway Expedition to the Salt river valley of Arizona; Mr Alfred Kidder, II's studies of his excavations in Venezuela; in addition the results of the various expeditions are being studied by the men in charge.

A new system of cataloguing the collections under geographical, cultural, and typological divisions has proved so successful that all the collections of the Museum will be brought under this same system. The Museum received one hundred and twenty-four accessions.

DR FELIX NEUMANN died at his home in Washington on February 7th. Until his retirement in 1932, Dr Neumann was Assistant Librarian of the Army Medical Library and was an authority on the bibliography and history of medicine. He was a

member of the Board of Managers and formerly Secretary of the Anthropological Society of Washington. In 1931 Georgetown University conferred upon him the honorary degree of L.L.D.

WE NOTE WITH REGRET the death of Dr Knud Rasmussen, the Greenland explorer and anthropologist, in Copenhagen, December 21, 1933, aged 54.

DR DAVIDSON BLACK, anatomist and palaeontologist, honorary director of the Cenozoic Research Laboratory of the Geological Survey of China, and known for his researches on "Peking Man," died in Peiping, China, on March 16.



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## SOME MOOT PROBLEMS IN SOCIAL ORGANIZATION

By ROBERT H. LOWIE

### AXIOMS

TWO recent papers on social organization<sup>1</sup> explain the distribution of social phenomena by diffusion from a single world centre. Conclusions of such import challenge scrutiny as to the methods by which they have been reached. In my judgment they are corollaries of questionable axioms.

According to Professor Olson, unilateral descent is an almost inconceivable anomaly, hence multiple origin is unthinkable: not only have all American clan systems sprung from one source but that source must lie in the Old World to save us "from the awkward plight of positing their special creation within the New World" (pp. 411-14). The axiom is not new, since Lewis H. Morgan (*Ancient Society*, pt. II, ch. XV) considered the clan (gens) an "essentially abstruse" institution and alleged "the improbability of its repeated reproduction in disconnected areas." Those who do not accept the dogma naturally have offered hypotheses to account for clans. Professor Olson chides them for explaining "the esoteric in terms of the prosaic." What does he conceive an explanation to be? Should it reduce the unknown to the unknowable?

There is one attempt to prop the axiom. Unilateral reckoning, it seems, is esoteric because "it contradicts the duality of parenthood and results in an unnatural stressing of one side of the family. . . . Children naturally feel that the parent bestowing clanship is of more importance than the one who is nothing more than a biological accessory." Yet in our own society the father alone bestows "familyship" without reducing the mother to the status of a mere biological accessory. Correspondingly, in primitive matrilineal societies the father is *not* eliminated; he and his kin remain important, as the Crow, Trobriand Island, Banks Island, Hopi data irrefutably demonstrate. Indeed, the avunculate is so frequently balanced by the position of the father's sister that I have suggested the term "amitate" to express her status.

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<sup>1</sup> E. M. Loeb, *Die soziale Organisation Indonesiens und Ozeaniens*, A 28: 649-62, 1933.  
R. L. Olson, *Clan and Moiety in Native America*, UC-PAAE 33: 351-422, 1933.

Implicitly Dr Loeb holds the same axiom; explicitly he contrasts the approach of the "evolutionist" and the "culture historian." The latter does not ask where or how a trait originated, but merely determines distributions and empirical trait-complexes. To chart these, we learn, automatically yields the direction (*Verbreitungsrichtung*) of the spread of elements (p. 650)—and that apparently is all we ought to seek. Why, we ask, is it taboo to convert an empirical association into an organic one (p. 661)? Does Dr Loeb imagine moieties, clans, avoidance rules, totemism, exogamy, and cross-cousin marriage to have all sprung up simultaneously in a single spot by a divine fiat? If not, some of them are earlier and may have paved the way for others. If so, traits *a* and *b* would be functionally related, and the occurrence of *a* would favor a repetition of *b*.

Culture history favors neither diffusion nor independent evolution. Scientific methodology prefers the diffusionist approach wherever the alternative is to fall back on that vague concept, psychic unity; for diffusion explains a differential similarity while psychic unity would call for universal occurrence. The tables are turned when the observed resemblance is traced to a shared concomitant; for then the purely external factor of a migration is supplanted by an insight into essential relations.

Be this as it may, Dr Loeb errs in asserting that a chart ever reveals anything but spatial range. It certainly does not automatically prove the direction of trait migrations. That must be established by extraneous evidence. Dr Loeb and Professor Olson offer some such evidence; let us examine it.

#### HISTORICAL CONNECTION AND HISTORICAL CONNECTION

Intercourse between India and Indonesia is a matter of documentary record. Dr Loeb meritoriously adds to the evidence by registering Tamil kinship terms in Sumatra and Mentawai and even in Fiji. This recalls the Tamil bell found in New Zealand in the early days of European settlement.<sup>2</sup> What, however, does all this prove? Connection, assuredly, if philologists accept the linguistic proof. But *not* what Dr Loeb imagines, viz., that cross-cousin marriage, etc., must also have come from the same source as the terms. Abyssinia shares with Western civilization coffee, firearms, and Christianity. But though the coffee-tree is indigenous in Abyssinia, the Roman Catholic and the Greek Orthodox Church did not evolve from the Monophysite sect, and gunpowder has a history of its own.

The fallacy is a favorite one of Olson's. California and the Pueblos share aspersion, plume offerings, ceremonial pole climbing, etc.; therefore "the

<sup>2</sup> Elsdon Best, *The Maori as He Was*, 60, 1924.

unilateral complex in California is derived from that of the Pueblo area" (p. 362). What such coincidences can prove is contact, hence the *possibility* of dissemination for other traits in *either* direction or from a common source. The "unilateral complex" is not one of these in my opinion, because it is not a trait at all (see below).

Both authors become unintelligible about cross-cousin marriage. The Western Cree are reported to prefer it; therefore, argues Olson, they probably once had a clan or moiety organization (p. 359). Yet no one has determined the correlation of the two phenomena, and a very high coefficient would be required for such an interpretation. Actually, to take a few random cases, cross-cousins are not permitted to marry by the Maricopa, Crow, and Hidatsa, and the alleged occurrence among the Hopi remains unconfirmed. Considering the fairly wide distribution of Omaha and Crow types of terminology, the matrilateral form of this marriage would involve union with a "mother" or "daughter," respectively, which would be repugnant to many natives. Olson, however, persists in stressing cross-cousin marriage as a common correlate of unilateral groups in every area of the New World. The arbitrariness of its adhesion is offered as evidence of a common origin (p. 412). If the association were as regular as, say, that between shamanism and the tambourine, it would doubtless be significant; since it is sporadic, if not actually rare, it is not.

To turn to Loeb, we learn that the symmetrical form of cross-cousin marriage as found among Australians, Dravidians, and Fijians is presumably the normal and original one (p. 652). This statement, once plausible, has long ceased to be so. The Miwok case is flatly contradictory, some Australians practise asymmetrical forms only, and so do certain African tribes. What is more, Gifford, Rivers, and Kirchhoff—dealing with three distinct areas—all explain the origin of cross-cousin marriage on an asymmetrical basis. This is equally supported by Malinowski's data on the Trobriands and Durlach's on the Tlingit. If the really preferred marriage here is not that with the cousin, but with the man's paternal aunt, for which the father's sister's daughter is merely a substitute, the implication is obvious. I do not consider the matter closed; I am demanding a recognition of well-authenticated facts.

#### CONCEPTS AND REALITIES

I distinguish between concepts with classificatory utility and historic realities. The term "missile" is not meaningless, it includes the dart of a blowgun, an arrow, a slingshot, etc. But it would be absurd to derive the arrow from the stone of a sling. In my judgment a "unilateral organization"



exists only in our abstracting minds, and its two types—maternal and paternal clans—are not species of one genus, but wholly diverse entities. That is why the suggestion that a clanless tribe could have observed a paternal clan and, borrowing the abstract idea of unilateral descent, created a maternal system, or vice versa, appears not only improbable but preposterous. What can a clanless visitor observe in a society organized into clans? It is as though he were to note the use of a blowgun and forthwith to introduce a bow among his own people. There are no Platonic ideas of clans floating about in savage communities. A paternal clan is an alignment of kin; the observable phenomenon is that children follow the father's group, that ego, his father, father's brother, etc., are grouped together. The visitor can take over this pattern or leave it alone; what sort of counter-suggestion would make him get the idea of never under any circumstances permitting the inclusion of children with their father, of rigorously segregating them from the children of their paternal uncles, and so forth? That would indeed be spontaneous generation with a vengeance; and I can imagine no more "awkward plight" than that of having to assume a repeated transmutation of this kind.

I see no mystical value in the observation made by several writers that maternal and paternal tribes exist everywhere in close contiguity. The logical possibilities are: loose organization, maternal and paternal descent; hence a matrilineal block naturally adjoins a patrilineal one or both a patrilineal and a clanless area.

When, of course, definite clan systems are established, either type may easily absorb features like badges, designations, etc., from the complementary type and such traits may also be adopted from and by groups not based on descent at all. Olson makes a really interesting point in showing that certain polar ideas such as Sky-Earth, Birds-Beasts, Summer-Winter, are linked with moieties. Unfortunately he fails to inquire in how far these pairs are properly equivalents. Still more unfortunately he fails to see that these data, constituting a worth-while problem in themselves, are not closely related to his central theme, the history of "the unilateral exogamous group." The mongrel assemblage of "moieties" assembled under that head (pp. 401-407) neither correspond to that definition nor to any other one subject of discourse. Since the term etymologically means "one half," authors cannot be legally restrained from using it in that generic sense. But of the sixty-odd tribes in Olson's list at best seventeen are exogamous. In other words, the overwhelming majority of the instances are entirely irrelevant to the development of unilateral organizations. Even the Yuchi "moieties" with their endogamous tendency, even the Kickapoo,

Sauk and Fox "moieties" without definite fixity as to descent are grist for Olson's mill!

If we were willing to equate such pairs as Summer-Winter with Sky-Earth; if we granted that the general opposition of "moieties" in games is not a natural accompaniment of a pre-existing cleavage into two social groups; if in short we made the utmost allowances in favor of historical connections, the data would still tell us nothing as to the origin of the wholly diverse "moieties." They would at best prove that certain secondary features had spread widely, attaching themselves to this, that, and the other type of social unit. To infer more would be like arguing that the Republican and Democratic symbols prove the political parties to have originated as noble families with armorial bearings.

Olson's predilection for the "moiety" concept betrays him into scurvy treatment of other units. This applies especially to the non-dual phratry. In the roster of tribes of sibs without moieties, the Yuma, Delaware, and Crow are omitted "because their sibs are grouped into phratries." The gratuitous implication is that the phratries, too, are only masked moieties. Yet the Menomini had three (or five) phratries; the Wyandot, three; and the Iroquois League councils formed a tripartite instead of the otherwise customary dual grouping. It is not a foregone conclusion that the four Tsimshian clans developed by simple splitting; and since Australian sections are constituted on a principle radically different from that of the moiety they can hardly be said to have arisen "by simple division of the moieties" (p. 366).

#### MOIETY AND SIB

According to Olson, moiety and sib are units of the same category; and the moiety is the older of the two (pp. 403-407). If one defines the sib as a unilateral exogamous group, and the moiety as one of two sibs or major sibs (p. 353), the essential logical unity of the two follows by definition. Also the overwhelming majority of Olson's "moieties" are barred. Whether, however, a particular sib system and a particular moiety system are genetically related cannot be argued in the abstract.

As to the priority of moieties, I am open-minded. Here, too, each case must be examined on its merits, while wholesale settlement will obscure historical problems. Olson's argument is curious. He begins by considering the relative areas of distribution. The comparison "yields interesting but . . . inconclusive evidence." He then counts "moieties" and sibs, separately and jointly, a fruitless count because "moieties" no longer means anything in particular. A comparison of the occurrence of monitor pipes and sibs

would be quite as valuable. But the author himself modestly concludes that the relative frequency "tells little regarding the probable priority of sib or moiety." "More significant," he thinks is the considerable coincidence of sibs and moieties which "argues strongly for multiple and dual groups being part of the same generic complex and diffusing as such." This, if true, would be irrelevant and even contradictory to the thesis: if moieties and clans belong together and diffuse together, the argument in favor of either being prior to the other is nil.

The simplicity of the dual as opposed to a multiple organization is next cited on behalf of its priority as though the logically simpler were necessarily the historically older. However, Olson himself attaches little importance to this, for he passes on to kinship terminologies as being "of greater significance." The point here is that the widespread classification of cross-cousins as a group opposed to parallel cousins fits in with the moiety rather than the multiple clan division. Why is this subject dragged in at all, let alone, credited with significance? It applies at best only to the relatively few exogamous moiety systems of America. Moreover, this significant item suddenly vanishes in thin air when Olson concludes his irrelevancies with the admission that kinship nomenclatures, like the statistical count, and the consideration of distribution "again lead us into conflict and doubt on the question of relative priority."

Having thus admittedly produced no shred of evidence, Olson quaintly ushers in his final paragraph with the statement that "Other arguments favoring the priority of the dual organization are not lacking." What are they, then? Clans are said to subdivide more frequently than they fuse or become extinct. Actually, two cases—the Delaware and the Osage—are cited; they could easily be balanced by contrary instances from the Pueblo area alone. However, this type of argumentation is vicious. Whether segmentation or reduction is more significant cannot be settled by a count; here once more each case demands individual attention. The tortuous history of Assamese units suggests caution. But even if subdivision were more common, how would it demonstrate the primary number of units to be two rather than three or four? Three clans can be subdivided as well as two; the very Delaware cited by Olson have three phratries. Olson contends that the persistence of moieties after the rise of multiple clans is readily explicable. The *persistence* doubtless is; we should like to have some evidence of their prior existence.

Other points might be taken up. Olson (pp. 382-89) has misunderstood Kirchhoff, whose investigation indicates that only a few of the South American tribes examined had unilateral organizations. Olson's moiety

obsession prevents him from properly stressing the virtual absence of the dual organization in Africa (p. 412). And is the evidence for Chinese moieties really so strong (p. 414)? However, I shall confine myself to a single case.

#### METHODS OF PROOF

Granted Morgan's and Olson's dogma that the unilateral organization is an inconceivably abstruse creation, a single centre follows as a corollary and further debate is unnecessary. Those who reject the axiom naturally demand proof of the alleged historical unity. My treatment in *Primitive Society* of the Northern Plains clan systems as distinct from the Eastern systems involves certain standards of scientific evidence. My discussion is defective in not sufficiently stressing the diversity of matrilineal and patrilineal organization. Irrespective of this, historical connection of a kind—not derivation, say, of the Menomini from the Iroquois system, but transfer of such features as types of clan names—is strongly indicated throughout the vast Eastern area, even embracing the Southern Siouans. The Omaha no less than the Iroquois have totemic associations of clans, sets of personal names owned by clans, a grouping of clans into moieties.

The particular names of clans are certainly arbitrary parts of a system, i.e., they might just as well be one thing as another, hence they are suitable for an investigation of historical connections. Starting with the two Iroquois tribes that lack moieties, the Mohawk and Oneida share a Wolf, Bear, and Turtle trio; and this occurs, along with other names, among the Seneca, Cayuga, Onondaga, and Tuscarora, also among the Wyandot. Passing from the Iroquoian to the Algonkian stock, the trio turns up among the Shawnee, Mohegan, Ojibwa, Menomini; the Potawatomi have Wolf and Bear, as also the Sauk and Fox; the Delaware share Wolf and Turtle. Siouan tribes fall into line: Wolf and Bear occur among the Winnebago, Oto-Missouri, Iowa; Bear and Turtle among the Omaha; all three are found among the Kansas.

If next we take the residual clans of the Seneca, the westernmost member of the League Iroquois, we find Beaver, Deer, Snipe, Heron, Hawk, all of which except Deer occur also among the Ojibwa. The latter have a variety of new clan names, but their distribution is not random: Snake is shared with the Shawnee, Abenaki, Winnebago, Oto-Missouri, Iowa, Ponca; Crane, Bald Eagle, Marten, and Sturgeon with the Menomini. Taking the Winnebago as a starting-point, at least seven of their twelve names—Thunder, Hawk, Eagle, Bear, Wolf, Deer, Elk—are duplicated in the Menomini list, and their Fish may correspond to Menomini Sturgeon or Sunfish. The Menomini, again, share fully seven of the fourteen Kansas

names. In other words, irrespective of linguistic grouping, the tribes from the Atlantic coast to the lower Missouri area not only share the same type of designation, the names themselves largely overlap. There is a continuous chain linking New England tribes with those of Kansas; even Abenaki and Iowa still share Wolf, Bear, Snake, and there is an indefinite series of links in various directions.<sup>3</sup> This is proof of historic connection *in the sense defined above*.

But among the Northern Plains tribes the scene shifts with a vengeance. Taking Morgan's rather than my own Mandan list, three Eastern names persist—Wolf, Bear, Eagle; but the only name shared by the Hidatsa is a new one, Prairie-chicken, and that is the only Hidatsa name definitely known to be derived from an animal, one other being untranslatable and given by Morgan as that of an unknown species. The rest are: Hill People (Wide Butte), Water (Red Water), Knife, Lodge (untranslated: *maxo'xati*), Bonnet (Lower Cap). Among the Crow anything smacking of animal names disappears. My standard list contains not a single sample. One alternate designation for a clan, Pretty-prairiedogs, is obviously also a sobriquet; another translated "Bad Horses" really means "His-horses-are-bad;" Morgan's "Antelope" means (from his own native term) "Antelope-eaters;" his "Skunk" is perhaps to be similarly qualified: and neither for it nor for his "Ravens" have I ever secured an equivalent. In any event, these names are not traceable to the Mandan or Hidatsa, let alone, Eastern tribes. Gros Ventre and Blackfoot names follow the same pattern as the Crow.

Making the most of Morgan's Mandan list, the line of cleavage would put the Mandan with the East, curiously enough separating them from the Hidatsa, with whom their relations have been so close for two hundred years. As for the moieties into which Mandan and Hidatsa clans are grouped, the idea of a dual division of a tribe may quite conceivably have been diffused from the East *without the idea of unilateral descent and without exogamy*, which is lacking here as so frequently in North America. Observing a spatial halving of the tribe, say, in a camp circle could easily suggest similar arrangements to an outsider. The transfer of *that* idea implies nothing as to the diffusion of the clans in the absence of specific evidence to that effect.

Such evidence I consider lacking because (a) the type of clan names is radically different west of the Hidatsa, while no Eastern clan names are duplicated; (b) the clans in the Northern Plains do not own sets of personal names.

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<sup>3</sup> The above statement is deliberately incomplete, being designed to illustrate method.

In reply Dr Olson points out that nicknames occur among Eastern tribes also, though as secondary designations. He fails to note that most of those quoted preserve totemic references in contrast to such Crow terms as "Those-who-bring-game-home-without-killing," "Tied-in-a-knot," and "Greasy-inside-their-Mouths." He quotes *one* case from the Eastern Dakota on the Mississippi—hardly a typical Plains people—as definite proof that "among some peoples of the Plains nicknames have usurped animal names" in recent times. He conjectures that the secondary nicknames of the East were merely stressed by the Northern Plains Indians. His explanation of why they were stressed is remarkable: these people, it seems, had developed a nickname type of pattern for *all* names. "Tribes, societies, and persons are called after some real or fancied characteristic or event. So are the sibs. . . . It would be surprising if sib designations did not conform" (p. 356). Yet the list of societies from this area bristles with such names as Tobacco, Kit-fox, Raven, Deer, Dog, Buffalo, Mosquito, Skunk, Wild Geese. Indeed, such appellations suggested to Schurtz a possible connection with totemism. As for personal names, a respectable number is derived from the animal kingdom. Buffalo-bird-woman and Gray-bull, Medicine-crow and Horse are certainly not nicknames of the Sore-lip or Greasy-inside-the-mouth variety.

In order to account for the lack of clan ownership of personal names, which he admits to be "conceivably an important difference," Dr Olson suggests that nicknames by their very nature are so variable that sets of them are scarcely expectable. This rests on the misapprehension that a set would necessarily revolve about the same idea, as in the case of, say, Omaha names referring, directly or obliquely, to the Elk. According to Goldenweiser, this does not hold for the Iroquois, where the sets "have nothing whatsoever to do with the eponymous animal."<sup>4</sup> But even if the statement held true, it would merely explain why supporting evidence of this kind is lacking without adding one shred of positive evidence for the historical unity of Eastern and Northern Plains clan systems.

The one fact which Dr Olson resolutely refuses to face and explain is why, say, the Iroquois and Omaha clan systems, belonging to two wholly distinct stocks and tribes separated by over fifteen hundred miles, are definitely alike in pattern apart from descent, sharing even the specific clan names Deer, Bear, Turtle; while the fellow-Siouan Hidatsa and Omaha, separated by only a few hundred miles, share nothing—neither

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<sup>4</sup> A. A. Goldenweiser, in Summary Report of the Geological Survey of Canada, for the calendar year 1912, 470, 1913.

rule of descent nor clan sets of personal names nor type of clan names nor a single concrete clan name. If the divergences from the Eastern pattern are expectable "peripheral vagaries," why the amazing abruptness with which they set in? For nearly two thousand miles one can go step by step from the Atlantic coast to the mouth of the Missouri and find a gradual progression even in the very names; then comes a complete loss of all resemblance.

But Dr Olson finally does vouchsafe some evidence of similarities that in his opinion outweigh all differences. It is his favorite notion of polar ideas linked with moieties which he finds cropping up on the Upper Missouri. Actually, he has a single instance, the Mandan, where Prairie-Chicken, Eagle, Crow and an untranslatable name are found on one side, opposed to Wolf and two untranslatable names on the other. As shown, such alignment might be diffused apart from the basic unilateral scheme, and besides the evidence for historical connection of the *Mandan* with the East is not denied. Concerning the possible connection of the Hidatsa, Crow, and Blackfoot organization with the East Olson does not present any evidence. Contrary to his vehement statement (p. 360), these differ from the Eastern systems on every point that does not flow from the definition of a clan as a unilateral exogamous unit.

The insistence on moiety polarity fairly clamors for reëxamination of the data. I must here content myself with a partial survey. The Iroquois are credited with the Bird-Animal antithesis (p. 402). Morgan's findings fail to corroborate this assertion. Mohawk and Oneida lack moieties altogether. The Seneca group Snipe, Heron, and Hawk together, but *with the Deer at the head*; and according to tradition the bird clans are subdivisions of an original Deer clan. The Cayuga transfer Snipe to the Bear moiety, Hawk remaining with Deer. The Onondaga have a single bird clan, Snipe, as part of Morgan's Wolf moiety. Among the Tuscarora, the one bird clan, Snipe, is on the side of the two Wolf clans. Interestingly, Great Turtle and Little Turtle appear in *complementary* moieties. Let those who will accept an esoteric grouping of clans on a Bird-Beast basis as a fundamental fact of American social organization.

In the Introduction to his paper Dr Olson tolerantly suggests that differences in the interpretation of unilateral phenomena are legitimate differences of interest and objective rather than of method and validity (p. 351). It seems to me they rest rather on a different conception of proof or on the notion that a mere statement of possibilities may take the place of proof.

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CRIME AND PUNISHMENT AMONG  
THE BARAMA RIVER CARIB  
OF BRITISH GUIANA<sup>1</sup>

By JOHN GILLIN

THE Carib Indians now living within the drainage of the Barama River in the Northwest District of British Guiana number according to the best estimates perhaps six hundred souls distributed among thirty-three settlements. They speak a language which in the colony is known as "Pure Carib" to distinguish it from other Carib languages in British Guiana such as Akawai, Macusi, Oyampi, etc. Groups of "Pure Carib" speakers are also to be found on the Barima River which follows a course roughly parallel to that of the Barama. Due to the fact that the Barima groups have been exposed to greater exterior contact and due to the difficulties of travel, the present study was confined to the Indian groups living on the Barama. The only published writings concerning any part of the Barama River which have come to my notice after diligent search are those of Beebe, V. Roth, W. E. Roth and Schomburgh.<sup>2</sup>

The country along the banks of the Barama is covered with high bush, of which the mora tree is the most conspicuous feature and throughout most of the area the jungle harbors a fairly thick undergrowth. The influence of the tide is felt in the river for about thirty miles from its mouth, but beyond this point the land rises gradually southwestward to the low divide which marks the Venezuelan frontier. The upper reaches of the river have not as yet been mapped and the lower portions have been charted only by time survey, that is to say, without astronomical determination of

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<sup>1</sup> The writer is indebted to the Division of Anthropology of Harvard University for making the field work in British Guiana financially possible and for supervision of the project to the late Dr Walter E. Roth of Georgetown, B.G., for his practical assistance in organizing the expedition into the interior and for his scientific aid, and to His Excellency Sir Edward Denham, Governor of British Guiana, whose interest and cooperation greatly facilitated the undertaking.

<sup>2</sup> M. B. and C. W. Beebe, *Our Search for a Wilderness* (New York, 1910) describes a trip taken by the American naturalist and his wife to the Tasawini mining property on the lower Barama. Vincent Roth, *Morawhanna Memories* (published in the *Georgetown Sunday Chronicle*, Georgetown, B.G., 1932-33) describes an inspection trip taken by the author as Government Warden in 1918 from the upper reaches of the Barama to its mouth. W. E. Roth, *An Introductory Study of the Arts, Crafts, and Customs of the Guiana Indians*, B.A.E-R 38, 1924 contains casual references to the industries of the Barama Carib based on the author's personal observation. Richard Schomburgh (tr. by W. E. Roth), *Travels in Guiana*, I, ch. XI (Georgetown, B.G.), 1922-23 tells of a journey taken by the German explorer of Guiana in 1842 up the Barama to the Anamu and southward to the Corentyne.



positions. But the distance from the mouth of the river, where it flows into the Waini, to its source on the Venezuelan frontier is estimated to be about 100 miles in a straight line. To travel between these two points by way of the winding course of the river and the Indian paths, however, one must cover at least twice this distance.

The Indians live by hunting, fishing, and the cultivation of certain products in fields cleared from the jungle. The methods used in these activities, as well as in others concerned with the material culture, are still mostly primitive. The only outside "trade goods" in general use are axe-heads, cutlasses, knives, griddle pans (all of iron), glass beads, and, occasionally, cotton cloth and old-fashioned shotguns. During the first decade of the present century the lower part of the Barama was the scene of considerable activity on the part of outsiders. Two mission stations, a government station, a sawmill, several trading posts, and the placer mines of several hundred negro prospectors flourished actively over a ten or fifteen year period. At the present time only three small trading posts and a handful of negro prospectors remain in the Barama country. But it is possible that during their stay these influences as well as the British ban on intertribal warfare, which has been in force during the last hundred years at least, have had a serious effect upon the social, political, and religious activities of the Carib. Certain it is that at the present time the non-material side of this culture shows little of the formalism which is to be found in early accounts of West Indian Carib.

Among the Carib the formal aspects of law and justice are minimized.<sup>3</sup> In common with many primitive groups they lack written law, judges, courts, police, and centralized authority. Let us therefore first examine the social organization in an effort to understand how the question of offense and punishment is handled.

The Carib (karinye, "man") tribe or nation comprizes all those Indians in this region who speak the "Pure Carib" dialect. From their territories in the Barama and Barima basins all other Indian tribal groups have been eliminated. The Carib consider themselves racially distinct from other

<sup>3</sup> "The dispensation of justice (among the Indian tribes of Guiana) does not usually appear to have been the concern of the community as a whole, or of the chieftain as its representative" (W. E. Roth, *op. cit.*, 557). "There was probably no such thing as public punishment except perhaps in the case of adultery among the Orinoco Carib, where the whole village populace dealt with the guilty parties" (*ibid.*). "Certainly of the island Carib it is said they know not what it is to punish publicly, or to observe any form in the execution of justice; nay, they have no word in their language to signify justice or judgment" (Cesar de Rochefort, *Histoire naturelle et morale des îles Antilles de l'Amerique* [Rotterdam, 1665], quoted by W. E. Roth, *op. cit.*, 557).

nations, a point which remains to be proven by anthropometry, but they do possess certain distinctive cultural traits which space does not permit to be described here. The factors of tribal unity are territory, language, and certain culture traits, which are held in common but are distinct from those of other tribes. Within itself, however, the tribe as such has no political functions and little social importance. The political unit is the settlement, a group varying in size from fifteen to fifty individuals who live and cultivate fields in the same locality. These groups are located at wide intervals, usually in the jungle back from the river, and contact between them is consequently not close. Over each settlement is a headman whose authority, however, is decidedly limited and without sanctions. The headman is generally chosen by acclaim by the adult men of the group for life, or for the term of the existence of the settlement. Several factors enter into his choice: his personality, his economic power, his physical strength. Occasionally a son or other relative of a former headman may be chosen, although such a relationship is by no means the deciding factor. In so far as the headman's personality carries weight his opinions are respected and in that sense might be construed as part of the law, but few sanctions pertain to him which are not included among the prerogatives of the other members of the group as well. In other words, the headman has no special power to enforce his orders and in case they are violated punishment of the offender follows the lines laid down for all personal offenses.

The only occasion on which all the men of the settlement are likely to be together is during one of the periodic drinking bouts or *sprees*, which are sociable rather than legislative gatherings. On these occasions opinions are naturally exchanged, but such interchange can no more be considered legislative enactment than the informal airing of views which takes place in our own society at informal gatherings of men.

A distinction is present in the native consciousness between offenses against human beings and offenses against spiritual powers, between what we may call social and religious offenses. It is one thing to trespass on the rights of a fellow man and quite another thing to transgress a religious tabu. Breaking of a tabu is automatically punished only by the spiritual powers concerned, whereas the punishment of an offense against a human being involves the human factor. This paper is primarily concerned only with the secular aspects of punishment in so far as they can be distinguished, but examples of a positive and of a negative religious rule may illuminate the distinction between the two categories.

The custom of the *couvade*, for instance, requires that a man stay about his house (although not necessarily in his hammock) for several days, us-

ually about a week, after his wife's accouchment. If he goes out into the bush shortly after the birth of his child the smell of the new-born infant which clings to him will announce the fact of the birth to certain malevolent beings who specialize in annoying and killing babies. To take another example, when a tree is felled in the forest an offering to the spirit of the tree must be placed on the stump. Otherwise the spirit will lurk about the clearing, angry with this mark of disrespect, and trouble the crops instead of taking itself off, as it should, to a new residence in a young sapling.

The infringement of a religious rule of law brings unpleasant results, but there is frequently no idea of obeying the rule as a good in itself. A Carib is surrounded by a vast army of spirits, spirits of the bush and of the streams. Some are characteristically mischievous or malevolent; others are merely finicky and jealous of their rights, which include the treatment to which they are entitled. A Carib must follow the rules of conduct which will keep him out of trouble with the spirits. When he wants positive responses from the supernatural powers he consults a medicine man or *piaiyen*. It is practically impossible for a layman to attract the favorable attention of the spirits directly.

On the secular side, law and justice are highly personal. Only in cases, to be described later, in which an individual by the multiplicity and pertinacity of his offenses makes himself a public nuisance or a public menace do the members of the group take united action against him. And in such cases it appears that the group action is taken as the result of a sum of individual grievances rather than from a conscious sociological consideration for the welfare of the group as an entity.

Practically all secular offenses are punished by the victim or, as we would say, the plaintiff, who is assisted in certain cases by specialists having mastery of techniques involving spiritual powers. A man's brothers, real or classificatory, will assist him in these matters upon occasion. The latter practice furnishes the basis for a loose sort of collective responsibility. Signs of a formalized grouping of relatives are, however, lacking. The kinship terminology is a variety of the bifurcating type, but I have been unable to discover distinctive names, insignia, totemistic concepts or other indications of the existence of clan organization.

In a group such as this where public law is all but excluded by private law, little attention is paid to abstract ideals of right and wrong. A Carib is only mildly interested in offenses suffered by other individuals. Adultery, for example, is regarded as a delightfully exciting game except when one's own wife becomes involved. Retribution is therefore the important factor in punishment.

The most serious offenses are homicide, poisoning, use of sorcery, theft, and adultery. Homicide is justifiable when used as retribution for a clear case of adultery or when it is obviously due to accident; in all other cases it is subject to retribution. Poisoning may be distinguished from homicide in cases where it is not fatal; poisoning itself is used as a form of retribution, but secretly, and in any case if the poisoner is discovered, the intended victim feels that an offense has been committed against him. The same is true of sorcery which is used as a means of retaliation. Practically speaking, however, if a Carib who has committed an offense discovers his victim using either poison or sorcery against him as a retaliation, he devotes his efforts to self-protection rather than to counter retaliation. Public opinion supports the use of poison and sorcery as means of retaliating for an unprovoked offense. On the other hand, the use of these measures because of mere dislike, sadism, drunkenness, or anger is regarded as offensive and properly to be punished.

Theft is the misappropriation of another individual's property. All good are individually owned among the Carib. A man owns, for instance, his field, house, hunting and fishing equipment, canoes, ornaments, tools, the game he has bagged. A woman owns the implements which she uses in field and house, the pottery which she makes or acquires, the basketry (which is made, however, by the male members of the family), her clothing and ornaments. Where the Indians have come in contact with prospectors for gold, each man has private ownership in the gold creeks which he has discovered and which he may sell. A sorcerer and a medicine man each has ownership in his techniques and knowledge. All the foregoing types of property are alienable in one way or another. But each individual may also be said to own his or her personal name which is alienable under no circumstances. To prevent theft and magical misuse of the personal name, an Indian guards it closely and allows only trusted intimates to know what it is. Names—for example Big Frog, Curly Hair, Haimara (a fish), etc.—are invented by the mother and given to the child in infancy. They are based on supposed resemblance of the child to some animal and imply a faint spiritual bond between the person and the animal.<sup>4</sup> Communally held forms of property, if they may be so called, are songs and traditions.

As in many primitive communities, in spite of the importance of personal ownership, no member of the group is allowed to go in want. In all activities there is much sharing of property. It is distinctly understood, however, that all such sharing takes the form of giving and receiving, or of

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<sup>4</sup> This is, however, only a hint of personal totemism or guardian spirit concept. I have found no trace of a set of formulated rights and duties between the person and the animal involved.

lending and borrowing. Anyone, therefore, who makes use of goods clearly not his own, without making a suitable arrangement with the rightful owner, is guilty of theft.

Adultery<sup>5</sup> is intercourse with the recognized mate of another individual. Personal attentions on the part of a man to a woman are punished as adultery because they have but one meaning to a native. Although there is no elaborate marriage ceremony, there is no doubt in the minds of the natives as to what persons are "married." Both sexes for a varying length of time after puberty, sometimes extending over several years, indulge in sexual experimentation.

Each boy and girl usually has a series of temporary love affairs, which consist of the boy living for a period with the girl in her parents' house and moving on. When a man decides to "settle down," however, he approaches the girl's father and apprises the older man of his intentions. The father-in-law requires that he cut a field and build a house near the father-in-law's settlement, in order to show that the young man is serious. During the probationary period, while the young man is establishing his household, he is required to furnish his prospective father-in-law with game and help him in his activities. When all is ready, the male kinsmen of the girl take the groom out on a hunting expedition on which he is supposed to prove his ability as a hunter and a marksman in spite of his companions' good humored and boisterous attempts to scare away the game. If the groom is at all acceptable to the group, it is arranged that after some difficulty he gets a bag and returns to the settlement, after which a drinking spree usually

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<sup>5</sup> Adultery was introduced after white contact among the Carib of the islands, according to Rochefort. Says he, "Heretofore they knew not how to punish this crime, because it reigned not among them before their commerce with the Christians, but now if the husband surprises his wife prostituting herself to some other or have otherwise any certain knowledge of it, he does himself justice, and seldom pardons her, but dispatches her, sometimes with his club, sometimes by ripping up her belly from above downward with a razor or the tooth of an agouti, which is nearly as sharp. This execution being done, the husband goes to his father-in-law and tells him in cold blood, 'I have killed thy daughter, because she proved unfaithful to me.' The father thinks the action so just that he is so far from being angry with him, that he commends him, and conceives himself obliged. 'Thou hast done well,' replies he, 'she deserved no less.' And if he hath any more daughters to dispose of he immediately proffers him one of them, and promises to bestow her on him at the first opportunity" (Rochefort, p. 548-49, quoted in Roth, *op. cit.*, 561-62). In early times on the Orinoco, according to Gumilla, all recognized adultery, "notably when women commit it, but the Carib is the only nation which has a punishment fixed for adulterers, who are put to death by the whole village populace in the public place" (Joseph Gumilla, *Historia natural, civil y geografica de las naciones situadas en las riveras del Rio Orinoco* [2 vols., Barcelona, 1791], I: 132, quoted in Roth, *op. cit.*, 562).

takes place and the young couple start housekeeping. The couple usually, as has been said, start married life at the settlement of the bride's family, but later may move to another place. Thus is a marriage solemnized, if the procedure just described may be included under that term. Obviously, dalliance with an unattached girl is not considered adultery.

In the first two of these offenses intent plays an important part, contrary to its rôle in some primitive tribes. Accidental homicide and accidental poisoning, if the case is clear, do not call for satisfaction. Regarding sorcery, theft, and adultery, it is almost impossible for the Carib mind to conceive of the commission of these acts without malicious intent.

The Carib philosophy on the matter of intent, stated in our terms, follows the reasoning that accidents are to be classed along with that whole group of natural incidents which are often injurious and inconvenient to human beings. The causes, however, are spiritual or supernatural, and the results are due to transgression, perhaps unconscious, of a tabu. If a man kills or poisons another by accident, he is merely acting as unconscious agent of the spiritual powers who constitute the effective agent and cannot be punished. Personal antagonism is eliminated in such a case, the solidity of the group is unaffected, and retaliation has no function. But when a man commits an offense of his own free will, i.e., "with intent," the origin of the cause can be reached and compensation extracted.

To obtain satisfaction from one who has committed an offense against him a man may have recourse to one or more of the following media of action: (1) poisoning, (2) sorcery, (3) violence, (4) *kanaima*. And the group may resort to (5) violence, (6) ostracism, and (7) exile to rid itself of an undesirable member. The first four types of punishment may be called private, the last three public. Again, private violence and all group methods are overt, whereas poisoning, sorcery, and *kanaima* are secret.

Poison may be administered either in food or drink. The most common practice is said to be to insert some of the poison in the *cassiri* or *paiwari* (weak fermented beverages made from cassava) when the drink is handed to the intended victim during one of the periodic drinking bouts or *sprees*. The liquor is passed to guests at a drinking bout in calabashes and the most approved technique of poisoning consists in placing some of the poisonous material under one of the finger nails which in the act of passing the calabash is allowed to slip into the liquor.<sup>6</sup> (a) The most dangerous poison is said to be the ashes of the bloody apron (*wawrish shamisharu tupuru*)

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<sup>6</sup> This technique in poisoning is reported from several other Guiana tribes (see W. E. Roth, *op. cit.*, 562-64).

worn by a menstruating woman. This poison will cause the victim to vomit blood. (b) The poisoner's finger nail scraped fine and put in the drink is regarded as a deadly poison for all persons except the administrator. (c) Bottle glass pounded fine is a reliable method and is said, with good reason, to be the quickest of the poisons. (d) The bones of any snake burned or dried and subsequently powdered are regarded as poisonous. (e) Paito, a small fish which when burned gives a supposedly poisonous ash, is also administered in drink. As might perhaps be expected, an antidote may be used for all of the above poisons with the exception of *c*. A tea is brewed from the leaf of a certain tree, which, when imbibed, causes vomiting. This brew must be made in secret in the afternoon, put out in the evening dew to cool, and must be drunk before retiring and immediately upon rising so that vomiting takes place twice.

The aremi emu is a professional sorcerer whose services may be enlisted to obtain satisfaction for a crime. The aremi is to be distinguished from his contemporary the piaiyen or shaman by the fact that the latter's functions are more decidedly religious and healing. In training and technique these two functionaries differ. (The piaiyen's chief tool is the maraka, a rattle made from an empty calabash containing pieces of quartz which represent certain classes of spirits: the aremi does not use this paraphernalia as he does not have control of these higher spirits. The piaiyen puts himself into a trance-like state for communication with the powers by drinking tobacco water, whereas the aremi drinks pepper water which produces a more violent reaction resembling fits, etc.) Now if a man has a grievance against another, he will go to the aremi in secret and ask him to take the case. The sorcerer's procedure with the intended victim is as follows. After having got in touch with his spirits by drinking pepper water he will arrange to get near the victim in a casual manner. He will pick up some small object, blow tobacco smoke upon it, and without being noticed will throw it onto the victim. The consequences depend upon the type of object which is thrown, e.g., a piece of offal will cause the victim to rot away, a piece of wood will make him stiff, etc. But none of these results will appear unless the aremi has first blown tobacco smoke on the object. The tobacco smoke seems to be the embodiment of the aremi's power. For instance, he may merely draw near his victim and blow tobacco smoke on the unfortunate individual, making a wish at the time. If the smoke touches the victim, the wish will come true. Examples are related of men who have been turned into monkeys in this manner.

The victim, however, may save himself. If he feels that some harm is being done to him, he consults another aremi who undertakes to discover

who or what is doing the damage. An aremi can make such discoveries because he, with the help of his pepper water, can see and consult spirits in the night. He can see in a dark room as if a light had been lit. Having taken a case he therefore works during the night, and next morning makes known his diagnosis to his client. He tells the client who is doing the mischief and why; and he prescribes certain food tabus which will neutralize the trouble-making machinations of the rival practitioner. (If a client, in his ignorance, is unfortunate enough to consult the same aremi who has served his persecutor, this fact is concealed by the aremi in question, who proceeds to do more harm to the victim.)

A piaiyen does not usually use his power to obtain revenge for other persons, but he may use it for his own purposes, that is, to obtain redress for an offense against himself. His procedure is as follows. He removes one of the small spirit stones (*tarikano*) from his *maraka*, swallows it, takes a long puff of tobacco smoke, and points his hand at the victim. If he wishes to kill, the stone passes entirely through body of the victim; if he wishes merely to cripple, the stone remains in the victim's body. In either case the wound is invisible. It is part of the training of the piaiyen to learn the technique of shooting. Upon swallowing the missile the piaiyen moves his left hand from his neck to the right elbow joint where the missile is held as in the magazine of a gun. Several "shots" may be kept in this storage space just above the right elbow joint. It is believed that a tube somewhat like the barrel of a gun extends from the piaiyen's neck to the elbow joint and from the latter point to a small opening between the bases of the first and second fingers. I have several times been shown small scars which purport to be the muzzles of this anatomical shooting apparatus. With the "shots" held above the elbow joint, the piaiyen, when ready for action, takes a long inhalation of tobacco smoke and extends the right forearm in the intended direction. The force of the smoke is believed to be the physical agency necessary for the ejection of the shot.

If a man suspects that he has been the target of a piaiyen, he may consult another piaiyen who will endeavor to remove the object from the patient's body. Practically speaking, this means that the supposed victim feels pain in a certain part of his body. He goes to a piaiyen who explores the spot with his hand and locates the offending missile. He then blows tobacco smoke on the spot and sucks out the stone, if it is there. In case the stone has passed entirely through the body of the victim, the operator obtains only blood as the result of his efforts. This sucking can be done anywhere, but if the trouble continues, i.e., if the rival piaiyen shoots further stones into the body of the victim, the healing piaiyen and his patient retire into



the toakai or consultation room made of palm leaves. Here the practitioner calls the spirit which is harming his patient. He tells the spirit that it must desist, otherwise he will call the tiger spirit which will devour the offending spirit. The theory of the above described shooting process is this. Although the piaiyen is spoken of as shooting his victim, he ceases to be the active agent once he has invoked a spirit. The stones which are projected are used by the spirits in the same way in which arrows are used by human beings. The piaiyen is a passive agent at the service of the spirit.

Direct personal retribution for an offense may be used in cases where the culprit is caught red-handed. If a man surprises another committing adultery with his wife, immediate violence will be the result. Fists, cutlasses, bows and arrows, or guns will be employed. A good many petty grievances also come to blows, usually disputes arising during cassiri speers. When a man is sober, he prefers to seek satisfaction in a more secret manner. It sometimes happens that, as a result of a fight, two settlements are officially at odds with one another; members of the respective settlements are forbidden by a consensus of opinion to have anything to do with those of the other. In case a member of one settlement transgresses this prohibition and enters into friendly relations with the other group, the headman of his own group may attempt to use either oral or physical coercion to enforce conformity.

Perhaps the most interesting of the forms of personal retribution is *kanaima*, a cult which is found among practically all of the Indians of the Guianas.<sup>7</sup>

If all other means of obtaining redress have failed, a man may decide to become a *kanaima*. This is a very serious step because it means that he must leave family and friends, must undergo extreme privations and social ostracism, must devote all his life and energies to the accomplishment of his purpose. The facts concerning this strange cult are difficult to determine because I have not succeeded in interviewing any individual who would admit having been a *kanaima*. The beliefs and attitudes concerning the cult are, however, herewith briefly set forth.

If you wish to become a *kanaima*, you establish contact with a *kanaima* headman who can usually be found hiding about in the bush. He teaches you the art. During the novitiate you sleep at home, but spend your days in the bush with your teacher. You are taught to enter houses without being seen, to twist joints and manipulate bones, to benumb the senses of your victim, and so on. One of the disagreeable features of the cult is that the

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<sup>7</sup> See W. E. Roth, *Animism and Folk-Lore of the Guiana Indians*, BAE-R 30, ch. 18, 1915.

members find the habit of evil doing difficult to break, so that after accomplishing the original purpose of revenge, the kanaima continues to practice his outrages on innocent victims. For this reason, kanaimas are feared and may be killed on sight by all normal persons.

Kanaimas lead an abstinent life. They eat no meat with the exception of the djokoro (dukwaru) bird which, because it is not easily seen is believed to make them invisible. Other meat is believed to make them heavy footed. They eat a pimpler palm called kosako because doing so causes the kanaima's victim to have the sensation of being choked and pricked. They eat rupe, a white fungus that grows on dry wood, because it makes them light so that they can run fast. They drink only rain water that has collected in the hollows of leaves; creek water is not imbibed because it is running too strongly and makes the kanaima lose control of himself too easily. The rain water is clear and makes the kanaima clear headed. At night the kanaima rubs his skin with pepper, instead of building a fire to keep warm. As a result of these austerities, it is said that no animal will eat the body of a kanaima, the flesh being too rank.

It is believed that kanaimas roam about the bush waiting for an opportunity to waylay a victim. Across the trail they stretch a spider web on which is rubbed the juice of a plant called kuraru. When the victim touches the web, he falls as in a trance, whereupon the kanaimas leap upon him, twist his joints, and stretch his tendons. They also carry a black powder made from the dried powdered root of a plant called masi. This powder put in the mouth of the victim makes him cough and sneeze and get a cold. If it is swallowed, the viscera decay. Victims usually do not remember enough of their experience to talk about it afterward, but to prevent any possibility of betrayal, the kanaima may pierce the tongue of the victim with a snake's fang which he carries for the purpose. When they have finished their work, the kanaimas disappear, leaving their victim to regain consciousness alone. After a time he picks himself up and goes home where he soon develops fever, has aching joints and speedily dies. Due to the fact that he cannot or will not talk, the unfortunate sufferer's friends and relatives are able to obtain no particulars which would enable them to seek out the kanaimas. The work of the kanaimas can, however, usually be recognized by the blue finger-marks left on the body of the victim, bruises left by the kanaimas while manhandling him.

There is no cure for the fever and "bone ache" resulting from an encounter with kanaimas. The kanaimas must simply be avoided. A small bees' wax image made in the shape of a man, if carried in the bush, enables one to spot the anaesthetizing spider web, and often the kanaimas them-

selves, before harm can be done. A certain plant with roots resembling a closed fist, if hung in the house, frightens kanaimas away. As an antidote for the black masi powder taken internally, the slimy inside bark of the congo pump tureke is made into an infusion and drunk. (Sarusaru congo pump is not used for this purpose.) If the kanaima has put the powder on the victim's skin, the black banana sucker (mekuru myu) is pounded, soaked in water, and applied to the skin. After the kanaima victim has died further precautions must be taken. The kanaima, to complete his task, must visit the grave and suck the waters of decay from the body through a hollow reed which is inserted into the ground. If the kanaima does not succeed in drinking the body liquids he will die a horrible death; they purify his body in some way after the perpetration of the outrage. To forestall the kanaima, the body may be wrapped in the leaves of the small banana (puma' bu) which are poison for kanaimas, but not for other persons. Or the juice of the haiari (a fish poison) is mixed with some of the body waters and placed in a bowl on the grave. A kanaima's one aim at this point is to drink some of the body juices, however this may be accomplished. Finding in a bowl on the grave some of these juices, the taste and odor of which completely obliterate the slight acidity of the haiari, the kanaima is believed to drink unsuspectingly and thus be deceived.

In comment upon the beliefs regarding kanaimas, it must be said, first, that there can be no doubt that such beliefs do exist. Whether or not on the other hand, there are actually such persons I am unable to say with certainty, because none of my informants would admit having used this method of punishment himself, nor was any of the several hundred men with whom I came in contact pointed out as being, now or formerly, a member of the cult. But examples of former members of the tribe killed as kanaimas were recited. Such findings are, of course, perfectly in consonance with the beliefs regarding the cult, because discovery of membership means instant death at the hands of non-members. On the theory that where there is so much smoke there must be some fire, I am inclined to believe that there is such a cult of avengers, voluntary outcasts who, with the aid of black magic, devote a period to vengeance and possibly to purely malicious mischief. Nevertheless, it seems that many of their alleged activities are grossly exaggerated parts of the folklore and that many undesirable phenomena and uncomfortable bodily symptoms of other origin are erroneously attributed to them. In any case, the mere fact that they are believed to be effective agents of punishment justifies a consideration of the subject in a discussion of Carib penology.

So much for the personal methods of punishment and retribution.

Occasionally a member of a group acquires a reputation among his fellows as an undesirable character. He may repeatedly pilfer from others' fields; he may trouble the women, be lazy, show himself ungenerous, constantly pick quarrels, or make himself obnoxious in other ways. The men of the settlement will talk to him, but if he does nothing to improve his position in their eyes, he will be advised to leave on pain of having life made very unpleasant for him.

If he persists in remaining he will find that he and his family are social outcasts: they are not invited to drinking parties; he will be unable to borrow anything; he will get no help in hunting, fishing, field cutting, canoe building or other activities in which the men assist one another, nor will his wife receive aid in her occupations; his household will be excluded from the water-hole and bathing place. In short, he will lose all advantages of group life. In aggravated cases, the other men may beat him or even kill him, if he fails to take the hint. Ostracism within the group and violence are, however, seldom necessary. Such a man with a vestige of common sense leaves the settlement while he can comfortably do so. I know of one man on the Barama who has been ejected from six settlements in this way, so that he has become a permanent outcast.

It is apparent that the great majority of punishments are handled by individuals. And the tendency is to carry out the retaliation *sub rosa*, as secretly as possible. But why this bashfulness and fear of coming out into the open when settling accounts with a wrong-doer? The Caribs, when questioned directly, reply that secrecy prevents further reprisals and also prevents the culprit from protecting himself against a deserved punishment. I believe that the social function of keeping these matters under cover is to prevent rifts from reaching the surface, so to speak, and thus splitting the group apart. A Carib group lacks strong central authority of any kind. In the absence of adequate political, judicial, or police authority, secretive methods of punishment have evolved as the only possible means of enforcing the "law" without destroying group life. When a man sets out to punish an offense he usually attempts to keep his activities secret, not only from the object of his punishment, but also from other members of the settlement. Only rarely is open violence resorted to or other members of the group, such as relatives, admitted to the case.

It may be asked, however, is not the looseness of the group due to the unorganized condition of the legal and penal programs? It is obvious that the absence of a socialized or public method to determine guilt, such as a court, leaves many of the antagonisms in society uncomposed. It is true that cases which come out into the open and are punished openly, such as

killing of the adulterer, come before the court of public opinion. But many grievances, as we have seen, are handled secretly, and the guilt of certain persons is often based only on suspicion. In such cases punishment may fall on the innocent, who naturally take offense and retaliate. Consequently the solidarity of the group is likely to suffer.

Ignoring the theoretical question as to the relative effect of external as compared with internal conditions on the institutions of a society, I believe that in the case of the Barama Caribs external environmental and political factors have played the preponderant part in molding the institutions of this society as they exist at present. In this region a hunting, fishing and agricultural life restricts the size of the group and isolates it. Only a small group with a wide hunting territory about it can exist, if the people are to have sufficient animal food. Furthermore, the available crop-raising soil in any one spot will support only a small population, because of the fact that cassava requires a drained sandy loam, a type of soil which is found only in small and widely scattered areas in the jungle. This soil even when located will, however, produce only two good crops, after which the field must be abandoned and a new one cut. This makes the disposition of the fields and the membership of any given settlement unstable. Even the term of existence of the settlement itself is usually limited. Hunting operations as carried on here also make for social instability and individuality, because hunting can be done most successfully by one man and seldom in parties of more than four. It is also often necessary for a man to be away from home for several days following game and, since whenever possible a Carib takes his wife and children with him when he is away over night, this factor also contributes to the looseness of the established group.

Even so, it seems that a stronger organization than the present was formerly maintained for purposes of war and defense. Since the early part of the nineteenth century, however, European political control of the colony has succeeded in repressing intertribal warfare. With their cultural background, therefore, the Carib have found environmental conditions and exterior political conditions unfavorable to the development of political power and group solidarity. As a consequence, I think, legal, judicial, and penal institutions which otherwise might support such a solidarity, show little formal development.

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## GLYPH X OF THE SUPPLEMENTARY SERIES OF THE MAYA INSCRIPTIONS

By E. WYLLYS ANDREWS

IN 1916, Sylvanus G. Morley initiated work on Glyph X in his treatise on the Supplementary Series appearing in the Holmes Anniversary Volume.<sup>1</sup> Following his identification of the glyph and its classification as such in a definite place in the series,<sup>2</sup> came a hiatus of seventeen years up to the present time, broken only by Teeple's discovery in 1928 of the fact that there were six forms of this glyph each of which could appear only with one of two consecutive coefficients of Glyph C.<sup>3</sup> His work is summed up in the following chart (fig. 1) drawn by Mr Lawrence Roys of Moline, Ill. For a reason which will appear later, I have given each of these forms the number which appears on the chart.

As a chart such as Figure 1 could not possibly present a comprehensive view of all the forms of Glyph X, I am giving in Figure 2, several variations for each of the six forms of the glyph. It will be noted that the distinguishing characteristics for Form 1 are very vague. Although the form given the number 3 is generally distinguishable by the tassel to the left of the glyph, there is a head-variant form with the large proboscis-like nose (m-n). Form 4 is always distinguished by the cross-legs element, although the element above or below it (o-s) varies considerably. Although Form 5 is generally distinguished by a round-nosed face with which the Maya sculptor allowed himself considerable freedom (t-u, x), a serpent variant (v-w) is often found. Each of the variants of Glyph X given in Figure 2 was, as may be assumed, identified as such either by its occurrence with the required coefficients of Glyph C or by its correct occurrence with these coefficients and its containing one or more of the characteristic elements of the original form given by Roys on Figure 1. Of the seventy texts under investigation where both Glyphs C and X are legible, only two cases appear which do not agree with the correlation.<sup>4</sup> With the additional material here presented, and a realization of the frequency of errors in the inscription, these may be considered mistakes, and Teeple's work accepted as basically sound.

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<sup>1</sup> Sylvanus G. Morley, *The Supplementary Series of the Maya Inscriptions* (Holmes Anniversary Volume, Washington, 1916, pp. 365-96).

<sup>2</sup> *Ibid.*, pp. 374-76.

<sup>3</sup> John E. Teeple, *Maya Astronomy* (Contributions to American Archaeology, No. 2. Carnegie Institution of Washington, 1931, pp. 66-67).

<sup>4</sup> On Lintel 29 at Yaxchilan, 4X appears with 5C, and on Copan, Stela 2, 3X appears with 1C.

The first fact that one would notice in examining a table of Supplementary Series arranged according to the chronological order of their corresponding Initial Series would be that the variation in the forms of Glyph X and the coefficient of Glyph C is one which occurs within very short periods of time. In other words, the cycle of changes is a short one. This may be seen by glancing at Nos. 5, 6, and 7 in Table 1. At 9.14.0.0.0. (No. 5), the number of the form of Glyph X is equal to the coefficient of Glyph C. At 9.14.3.0.0. (No. 6), three years later, it is one greater than the coefficient of C, and then at 9.14.5.0.0. (No. 7), two years later, it is again equal to the coefficient of Glyph C. Here we have two changes within a period of five years or one hotun.

TABLE 1 TABLE OF ALL AVAILABLE DATES BETWEEN 9.12.5.0.0. AND 9.16.5.0.0. WITH UNIFORM C-DATES AND LEGIBLE FORMS OF X

No.	Site	Mon.	Date	D & E	C Group	C	X
1	Piedras Negras	St. 6	9.12.15.0.0.	25	IV	4	5
2	Piedras Negras	St. 4	9.13.10.0.0.	20	V	1	2
3	Copan	St. J	9.13.10.0.0.	18	V	1	1
4	Copan	St. 5	9.13.15.1.0.	8	V	3	3
5	Uaxactun	St. 1	9.14.0.0.0.	17	V	3	3
6	Naranjo	St. 30	9.14.3.0.0.	4	I	4	5
7	Piedras Negras	St. 5	9.14.5.0.0.	15	V	4	4
8	Quirigua	St. E	9.14.13.4.17	7	III	3	3
9	Copan	St. D	9.15.5.0.0.	9	I	2	3
10	Yaxchilan	L. in Berlin	9.15.6.13.1.	11	IV	5	5
11	Piedras Negras	St. 10	9.15.10.0.0.	9	I	3	4
12	Holactun	T. of L. S.	9.15.12.6.9.	2	IV	2	2
13	Yaxchilan	L. 46	9.15.14.8.14	29	V	3	4
14	Piedras Negras	L. 3	9.15.18.3.13.	9	III	1	2
15	Yaxchilan	St. 11	9.16.1.0.0.	12	III	5	5
16	Quirigua	St. J	9.16.5.0.0.	4	I	6	6

As Glyph X occurs not only near the middle of the Supplementary Series, but also is directly dependent upon Glyph C, one is obliged to arrive at the conclusion that the former deals either with a lunar phenomenon or a lunar ceremonial.

Second only to the phases of the moon, in a primitive mind, one would expect to find an interest in its rising and setting.

With these three preliminary observations in mind, we may enter into the subject a little more deeply. Two obvious lunar months would be suggested to the Maya:

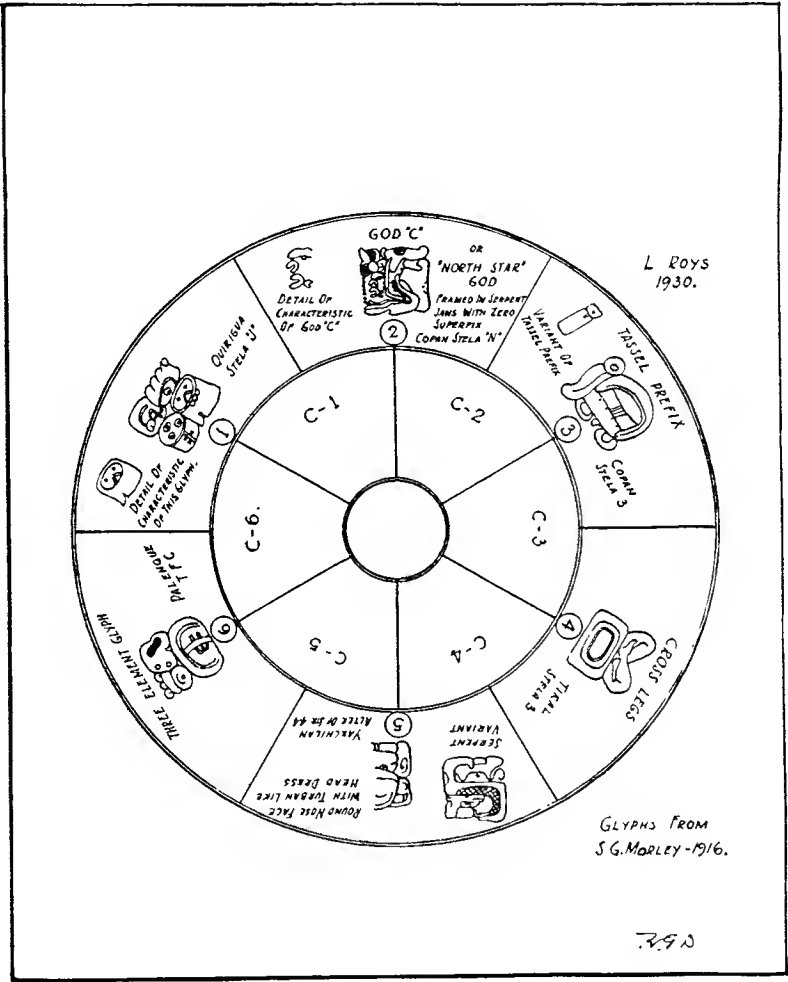
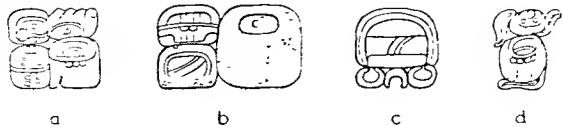


FIG. 1. The relation of Glyphs C and X.

- 1. The period from new moon to new moon: 29.53 days (which we know was expressed by Glyph C);
- 2. The period between any two days when the moon would rise at ap-



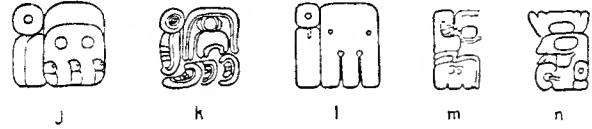
FORM 1



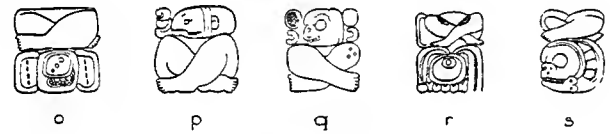
FORM 2



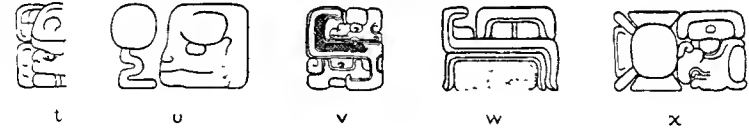
FORM 3



FORM 4



FORM 5



FORM 6



FIG. 2 Forms of Glyph X.

proximately the same time: 30.5 days (which we believe to be expressed by Glyph X).

The following equation expresses the relationship between the two. At the end of exactly five groups of six synodical months, the moon would rise at precisely the same time on the same day of the same synodical month.

Moon rises 48 minutes later each day (average):

$$48 \times 30 \text{ (no. of C months in cycle)} \times 29.530 \\ \hline = 29.530.$$

1440 (no. of min. per day)

Therefore the following cycle of 885.9 days would exist (see fig. 3).

The C-cycle would consist of five groups of six synodical months, and the X-cycle would consist of four groups of six X-months, and one group of five X-months. That is, the X-system would fall exactly one month short at the end of this period of time. This relationship is more clearly and accurately shown by Figure 4 which can be used as a visual confirmation of any mathematical calculations to follow.

Thus far, for the sake of clarity, an explanation of the proposed function of Glyph X has been given purely in terms of modern astronomical science. Therefore, it is necessary to realize that the idea would have been expressed in a rather different manner by the Maya, who had no comprehension of fractions, and would therefore have been compelled to express the idea in terms of whole days. Rather than a cycle of thirty months of 29.530 days each, the Maya would have conceived of a cycle consisting of sixteen 30-day months and fourteen 29-day months. In a similar manner, they would

*Sources of forms of Glyph X:*

- |                                       |  |
|---------------------------------------|--|
| a) Quirigua-Stela J.                  | p) Palenque-Temple of the Sun            |
| b) Naranjo-Stela 29.                  | q) Yaxchilan-Lintel 29.                  |
| c) Copan-Stela 3 (nodule).            | r) Copan-Stela 7.                        |
| d) Copan-Stela J.                     | s) Yaxchilan-Lintel 46.                  |
| e) Copan-Stela N                      | t) Yaxchilan-Altar near Structure 44     |
| f) Quirigua-Stela D (e).              | u) Chichen Itza-Temple of Initial Series |
| g) Yaxchilan-Stela 1.                 | v) Piedras Negras-Stela 36.              |
| h) Holactun-Temple of Initial Series. | w) Naranjo-Stela 30                      |
| i) Piedras Negras-Stela 3             | x) Quirigua-Zoomorph P.                  |
| j) Iskun-Stela 2.                     | y) Palenque-Temple of Foliated Cross.    |
| k) Copan-Stela P.                     | z) Copan-Stela M.                        |
| l) Naranjo-Stela 14.                  | aa) Copan-Stela 9.                       |
| m) Quirigua-Stela E (w).              |  |
| n) Quirigua-Stela I.                  |  |
| o) Piedras Negras-Stela 1.            |  |

have conceived of a cycle of twenty-nine months of alternating 30 and 31 days' duration, rather than a cycle of twenty-nine months, each of 30.51-

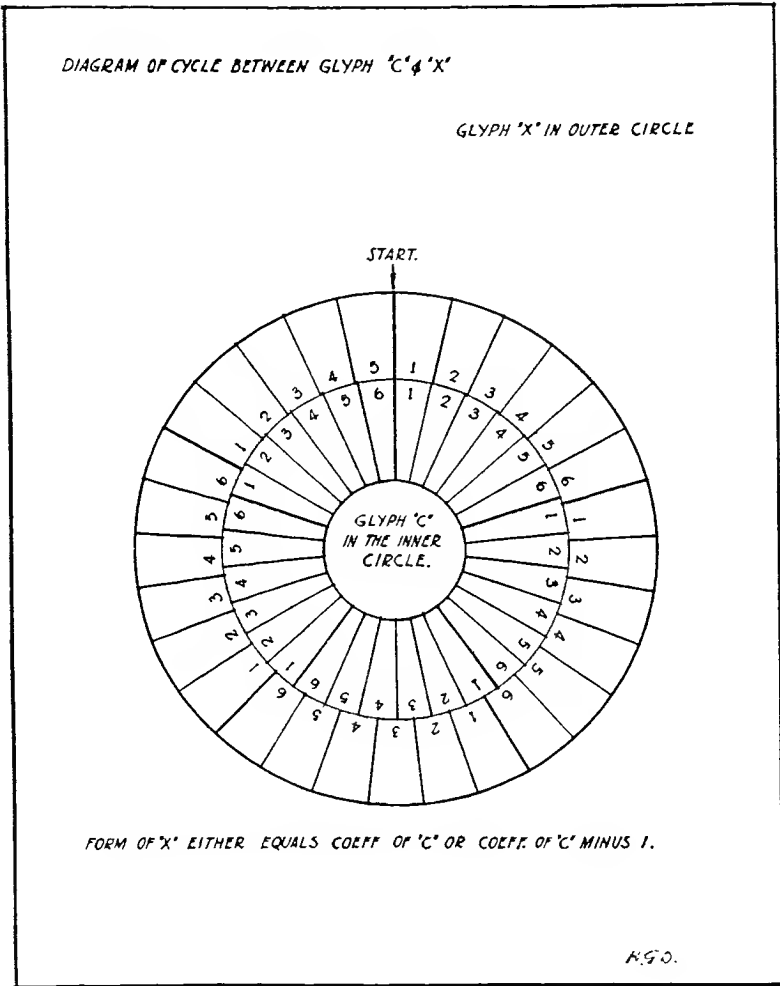


FIG. 3 Diagram of cycle between Glyph C and X

days' variation. In each of the above cases the length of the cycle will prove to be quite close to the necessary 885.9 days, although slight inaccuracy is bound to be present.

By comparison of Figure 1 with Figure 3, it becomes evident that it is infinitely less confusing to give each form of Glyph X a number rather than a name. Figure 3 also demonstrates the reason for assigning the number 1 to the form of X (assigned this number on Figure 1), i.e., because this form only corresponds to coefficients of both 6 and 1 of Glyph C. For convenience, the five groups of C-Moons in the C-X cycle have been numbered with Roman numerals from I to V. Thus a lunar date would be written 23-IV.C.3, meaning that 23 days had elapsed since the beginning of the fourth moon in Group IV.<sup>5</sup> (See fig. 4.)

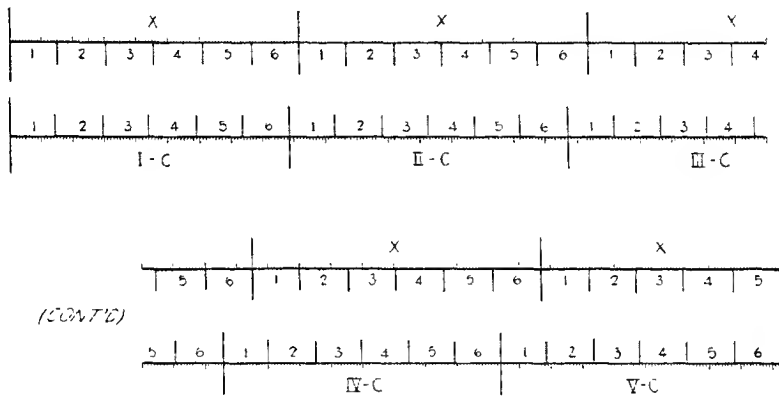


FIG. 4. Chart showing complete C and X cycle. (Scale unit equals two days.)

The cycle was established in the Initial Series by the following data: No. 6 must be in I.C, because if the date fell in Group II, III, IV, or V the form of X would have to be 3. (See figs. 4 and 2.) This placing was confirmed by No. 3 which can only be in IV.C or V.C. By counting backward, the number of moons between 6 and 3, the latter is placed in V.C and confirms our location. With this position established, any lunar date, i.e., Supplementary Series, accompanied by its corresponding Initial Series may be placed in a definite C-X cycle by counting backwards or forwards, 30 synodical months to a cycle, if the I.S. falls in the Period of Uniformity.

In Table 1 are listed all the dates which were available to me that fall within the period, 9.12.15.0.0. to 9.16.5 0.0., and used the uniform moon system, the readings for the coefficients of C, D and E being those actually

<sup>5</sup> It is necessary to understand here that the moon-age date, expressed by Glyphs C, D and E, as all other Maya dates, is a record of past time. Thus D19-C2 would mean that two moons have already passed and the present date was 19 days into the third moon.

recorded on the monuments, and the form of X likewise. In *each* case, the moon-age date is within two or three days of the value required by the uniform count, *and the form of Glyph X is that which we predict by the following mathematical calculations*, with the exception of Nos. 2 and 14, where there is a variance of three days, a length of time quite within observational error, and again in the Calakmul text which we will discuss later.

In the two examples which follow, it should be borne in mind that the standard Supplementary Series used is that given in No. 7 in Table 1, i.e., 9.14.5.0.0—15D—V.C.4—X4. However it should also be remembered that any Supplementary Series in Table 1 may be used equally well as the standard lunar date. Number 7 has been chosen here as it falls approximately in the middle of the period embraced by the dates in Table 1.

No. 11

9.15.10.0.0 —9D—?C3—?X.

Difference from No. 7 is 1.5.0 0 equals 304 moons, 24 days.

Remove largest multiple of 30 (one cycle)—here 300—leaves 4 moons, 24 days.

Count forward 4 m., 24 d. (on fig. 4) from No. 7 to reach 9—I C.3.

Consult Figure 4, and the form of X should be 4.

X is Form 4 on inscription.

Q. E. D.

No. 8

9.14.13 4.7. —7D—?C3—?X.

Difference from No. 7 is 8.4 17. equals 100 m., 24 d.

Remove the largest multiple of 30, here 90, leaves 10 m., 24 d.

Count forward on Figure 4 to reach 9 III.C.3.

Consult Figure 4, and the form of X should be 4.

X is Form 4 on inscription.

Q. E. D.

It must be borne in mind that the function of these calculations is only to prove the C.D.E. date uniform and to locate it in a moon group. The number of days expressed by Glyphs D and E will often vary as much as two or three days from the amount actually predicted, but the record of the inscription is the one used in the prediction of the form of Glyph X in Figure 4.

These two calculations illustrate the method followed in all calculations. In each of the cases in Table 1 the method is the same and the form of X is predicted correctly with the exception of two 3-day variations noted.

Thus, it is evident that in the above sixteen dates, the sum total of all available inscriptions with a clear, uniform moon-age date, and a legible Glyph X, our observations are confirmed in every case—amply sufficient evidence to form a clear proof.

Before continuing, I should like to bring up a rather interesting inscrip-

tion that is not in the above group, as the reading is not a sure one. On Lintel 1 at El Cayo, we find the inscription 9.16.0.2.16—3E—1C—2X. By calculation, it appears that the date falls in Group II, and that the moon-age reading according to the uniform requirements should be 3 and not 23. However if the date be read 23 days and kept in the same group the form of X would be the correct one, while if the date is read 3 days, the wrong form of X would occur. This interrelation tends to throw doubt on the assumption that Glyphs D and E were used interchangeably in certain cities of the Usmacintla valley, although at the present time one can but surmise as to the rules governing its use at these sites.

One more case comes to our attention. On Stela 51 at Calakmul we find the following inscription: 9.14.19.5.0.—14D—4C—X5. By computation this would fall into Group IV and the form for X would be wrong beyond the limit of observational or computational error—14 days. As this date falls in our period, only three possibilities occur to us:

1. Calakmul did not use the uniform X-system.
2. This is an actual mistake in the inscription.
3. Our theory is wrong.

The above inscription is the only one from this site available to the author which falls within our period and has a clear moon-age reading that is uniform, and it is therefore impossible to decide which of the two above explanations is the most satisfactory.

This paper covers all the Initial Series in the period between 9.12.5.0.0. and 9.16.5.0.0. X-dates falling outside this period do not necessarily conform with our observations even when C, D and E are uniform. One is thus led to believe that the period of X-conformity is the above, even as the period of C-uniformity is also from 9.12.2.0.16. to 9.16.5.0.0. Outside this period the X-calculations do not work out by the method here used. So while the function of Glyph X has been here explained and the exact usage of it during the uniform period has been established, there is still much to be done in the future. However, with the information contained herein, it will be possible, in the future to work out the systems used by the Maya before and after the uniform period.

#### ADDEND.A

While this paper was in press, the following new material has come to the author's attention.

Two new occurrences of Glyph X with a clear Initial and Supplementary series in the prescribed period, both of which act as excellent checks for our hypothesis, and conform exactly to the material presented above:

No. 17. Piedras Negras, Stela 3—9.14.0.0.0.—17E (for D)—V.C.3.—X3;  
 No. 18. Yaxchilan, Altar 3—9.16.1.9 3.—17E (for D)—IV.C.5.—X5.  
 The form of Glyph X of No. 17 at first appears doubtful, but upon closer examination is surely Form 3. By position (AS, on left side of monument), it must be Glyph X, and as the coefficient of Glyph C is 3, it must be either Form 3 or Form 4. As it is clearly not the well defined "cross-leg" Form 4, and bears a great resemblance to the face variant of Form 3 (see fig. 2, m), we may accept it as the latter.

The author wishes to state that he now regards the above decipherment of both the I.S. and the Suppl. S. of Stela 1 at Uaxactun (No. 5) as *extremely dubious*. This would be the only case on record of Glyphs C and X compressed into one glyph, and furthermore he has been shown by Dr S. G. Morley that the I.S. reading has no more than an even chance of being correct. This text must be regarded as of such a doubtful nature as to be of very slight value as a proof of this hypothesis.

Also, since this paper went to press another case has come to the author's attention where a form of Glyph X occurs with a coefficient of Glyph C that does not correspond to the fundamental conformation described in the first paragraph of this paper and illustrated on Figure 1. The inscription is on Stela 23 at Naranjo, and reads as follows:

9.13.18.4.18.—15D—C1—X5

The I.S. would place the Suppl. S. at 14—II.C.1, and Form 1 of Glyph X would be required, as the inscription is from the uniform period. Not only do we fail to encounter the required Form 1, but not even the alternate Form 2. The form of X is clearly 5, as is seen in the double occurrence of the round-nosed face with the turban headdress. This can only be placed in the same category as the other two records given in note 4, p. 345, and be regarded as an error. It is significant in this connection that another error occurs in the same text, the Sec. S. terminal date reading 2 Men 13 Yaxkin instead of the correct 1 Men 13 Yaxkin. The fact that in each of the three cases where this fundamental C-X correspondence fails, a different form of Glyph X is involved confirms the interpretation of these as errors. The coefficient of Glyph C on this monument was read by Teeple<sup>6</sup> as 5, in which case the form of X would be correct, but as the monument dates from the middle of the period of uniformity, and the uniform coefficient of C is 1, the element Teeple regards as an eroded numerical bar may almost surely be regarded as an eroded ending sign.

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<sup>6</sup> Teeple, *op cit*, p. 52, Table 4, No. 8

## KINSHIP AND SOCIAL BEHAVIOR AMONG THE HAIDA

By GEORGE PETER MURDOCK

THE Haida tribe is divided, culturally and linguistically, into four branches, three of which are found on the Queen Charlotte Islands off the northern coast of British Columbia. Of these the first or southern group is now extinct. The survivors of the second or central branch reside today at the village of Skidegate, and those of the third or northern group at Massett. The Alaskan or Kaigani Haida of Prince of Wales island, Alaska, who constitute the fourth branch, are mainly concentrated today at Hydaburg, although a few still live at the old village of Kasaan. In the summer of 1932, on a field trip sponsored by the Institute of Human Relations at Yale University, the author gathered data on kinship systems at Skidegate, Massett, and Hydaburg (hereinafter abbreviated as S, M, and H). At Massett, where he spent most of his time, he worked out the terms and their application on the basis of extensive genealogies, supplemented by interrogation of his three principal informants, Andrew Brown, Robert Ridley, and Grace Jones. His visits to Skidegate and Hydaburg were too brief for adequate use of the genealogical method. At Hydaburg, however, he had the services as interpreter of his best Massett informant, who was already fully familiar with the nature of the information desired, and who was likewise a relative by marriage of the informant, David Morse. And in Skidegate, he was able to use Durlach's<sup>1</sup> genealogical table, as corrected by Amos Russ and his wife, the parents-in-law of Durlach's too civilized informant.

Even more interesting to the author than the system itself are its sociological implications. Every relationship involves, besides the use of a particular kinship term or pair of terms, a series of more or less stereotyped patterns of social behavior, and it is through the channels set by these patterns that a major portion of the social life of the people flows. Thus a study of the sociology of the kinship system affords an excellent cross section of Haida culture in general. The folkways associated with each relationship are summarized below in conjunction with the definition of the terms.

In recording the terms, the phonetic orthography of Sapir<sup>2</sup> has been

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<sup>1</sup> T. M. Durlach, *The Relationship Systems of the Tlingit, Haida and Tsimshian*, AES-P 11. 104, 1928.

<sup>2</sup> E. Sapir, *The Phonetics of Haida*, IJAL 2: 145, 1923. Deficiency of type makes it necessary for us to use the symbol  $\tilde{g}$  for the velar intermediate stop instead of Sapir's crossed  $g$  and  $\hat{g}$  for the anterior palatal intermediate stop instead of Sapir's  $g$  with the diacritical mark transposed beneath the letter.



followed in preference to that of Swanton,<sup>3</sup> as both more complete and more in accord with current usage among students of North American Indian linguistics. Fine distinctions in vowel sounds, to which the Haida ear is not sensitive, have not been recorded, e.g., the *i* and *u* glides in which the Haida *e* and *o* sounds respectively terminate as regularly as they do in English. To Sapir's list of consonants, however, it is necessary to add the following: the velar voiced spirant  $\gamma$  as a common variant of the velar intermediate stop  $\dot{g}$  in Skidegate, a glottalized form of the same ( $\gamma$ ) in Massett, a phonemically equivalent glottalized *h* ( $h$ ) in Hydaburg, and the palatal sibilant voiceless spirant *c* (= English *sh*) in Massett.

A kinship system must be set in the framework of the social organization. The Haida tribe is divided into two exogamous matrilineal moieties, the Eagles and the Ravens, each of which is further subdivided into some twenty localized clans. The clan, which is frequently split into several sub-clans, comprises a varying number of separate households of one or more biological families each.

Swanton<sup>4</sup> presents the Haida system as a strictly classificatory one, in which nearly every term applies to all persons of a particular sex and generation in one of the moieties. While this is often true of the terms in their plural forms, as Swanton records them, they are usually much more limited in their application in the singular and vocative forms. It will be convenient, in defining the terms, to give first the basic (if not original) application of a term to a particular relative and then to show to what extent it is extended successively to that relative's own siblings, to his clansmen of the same sex, and to the corresponding members of the other clans of the same moiety. Whenever a term is extended to the clan, but not to the whole moiety, it nevertheless regularly applies to corresponding members of closely associated clans of the same moiety, i.e., to all clans linked to the one in question by such bonds as traditional common descent, customary alliance in war, and residence in the same village. Patterns of social behavior are to be understood as coextensive with the use of kinship terms; a person behaves toward an extended relative as toward an immediate one, with but minor and usually obvious modifications.

#### PRIMARY TERMS OF CONSANGUINITY

1. *tc'an* (M and H), *tc'i'nga* (S). Vocative: *tc'a'na* (M and H), *tc'ina'i* (S). Plural: *tc'a'na'laŋ* (M), *tc'a'nalaxŋ* (H), *tc'i'ngaxŋ* (S). Primary meaning: "grandfather" (man and woman speaking).

<sup>3</sup> J. R. Swanton, *Haida, an Illustrative Sketch*, BAE-B 40, pt. 1, 210, 1910.

<sup>4</sup> J. R. Swanton, *Contributions to the Ethnology of the Haida*, AMNH-MJ 5, pt. 1, 62 ff., 1905.

In the sense of "maternal grandfather," the term is extended to all men of the second ascending generation and upward in the opposite moiety, and in M also sometimes to men of the first ascending generation except those of the father's elan, who are called *ye'* (paternal uncle). In the sense of "paternal grandfather," however, it refers specifically to the father's father, who must, of course, belong to the speaker's moiety though not necessarily to the same elan. If the paternal grandfather is a fellow clansman, the term is not extended, except occasionally to his own brothers; clansmen of the second as well as the first ascending generation are called *q'a* (maternal uncle). If, however, the father's father belongs to a different clan, the term may be extended to all males of that clan of whatsoever generation, even to those younger than the speaker, and it is often thus used in preference to a more exact term. It may also be employed by courtesy for any old man irrespective of kinship affiliations, and in this sense it is frequently applied to old men of the speaker's own moiety but of other clans, though in M *q'a* is preferred even here. The plural refers regularly to the men of the paternal grandfather's clan.

A *tc'an* plays with his grandchild (*t'a'k'an*), makes toys for him, tells him stories and sings him songs, and keeps him in the absence of his parents. In return, the grandson performs services for his grandfather, e.g., bringing water and firewood to his house each morning. Between a man and his paternal grandfather an especially close bond exists. The former, if a first son, is usually given the latter's name at birth, and, according to the prevailing notion of reincarnation, he comes thereby to embody the soul of the latter. In this case alone can a Haida bear a name belonging to another clan. Sometimes a man receives the name of his father's father, not at birth, but at the funeral potlatch given after the latter's death. On certain very solemn occasions, as when going forth to pay the penalty for murder, the grandson wears the ceremonial hat of his grandparent. Finally in M, but not in S, a man or a woman is said to possess the right to use the crests of his paternal grandfather's clan when different from his own.

2. *na'n* (M), *na'ne* (H), *na'nga* (S). Voe.: *na'na* (M and H), *na'na'i* (S). Pl.: *na'nα'laη* (M), *na'nαlaη* (H), *na'ngalaη* (S). Primary meaning: "grandmother" (m. and w.sp.).

From "grandmother," either maternal or paternal, the term is extended to all women of the second ascending generation and upward in both moieties, except that in M those belonging to the father's clan are preferably called *sq'a'n* (paternal aunt). It is likewise extended commonly in M and occasionally in H to women of the first ascending generation in the speaker's own moiety but in different elans. It may also be applied, in M at least, to any woman of the paternal grandfather's elan quite irrespective of her age.

Finally, it is a respectful term of address for any old woman, whether related or not.

A grandmother tells stories and sings songs to her grandchild (t'a'k'an). Her granddaughter assists her in women's work. When a girl reaches puberty her paternal grandmother instructs her in the taboos which she must observe, e.g., abstention from fresh water and fresh fish and from looking at the sun or at the sea.

3. q'a (M and H), q'a'ga (S). Voc.: ga'gai (M), ga'ge (H), ha'gai (S). Pl.: q'a''lαη (M), q'a''<sup>a</sup>lαη (H), q'a'galαη (S). Primary meaning: "maternal uncle" (m. and w. sp.).

From "mother's brother," the term is extended to all men of the mother's clan and generation, and even to those of other clans of the same moiety; in the latter case, however, a different vocative is used: di q'a''is (M), di q'a' 'is (H), di q'a'ga 'is (S), meaning "my uncle there." The term is also applied to all men of the second ascending generation and upward in the mother's, i.e., the speaker's own clan with the sole exception of the paternal grandfather, who is called tc'an. The plural is used, in a special and still more extended sense, for the older people of both sexes and any clan in the speaker's moiety.

The Haida relationship between maternal uncle and nephew (nat) presents an example of a well developed avunculate. As a boy the nephew runs errands and does chores for his uncle, e.g., fetching water and firewood each morning. At about the age of ten he leaves his parents' home and takes up his residence with his uncle either permanently or until he becomes independent. He assists his uncle in the latter's every activity—fishing, hunting, canoe building, war, etc. The uncle assumes sole charge of his education and discipline. To strengthen and toughen the nephew it is customary for the uncle, twice or thrice each winter, to send him out to swim in the icy sea water, and to warm him on his emergence by lashing him four times on the back with brush. The nephew depends upon his uncle for protection. The latter's house is a sanctuary where he can take refuge when he gets into trouble, even if he has committed a murder. The uncle, if wealthy enough, must settle the matter by a payment of property from his accumulated store; only in S is the father expected to assume a significant part of the burden. If the uncle cannot pay the damages, the nephew is turned over to the injured clan to wreak their vengeance. Young men thus find it to their own interest to work without compensation to enrich their uncles. When a house chief dies, leaving no younger brothers unprovided with houses, his dwelling, moveable property, and privileges descend to his eldest sister's eldest son (in S to his eldest nephew by any

sister). The nephew discharges his duty to the deceased by giving successively, to the opposite moiety, a small feast (*gət'a'da*) the day after the funeral, a large feast (*də'wa'*) at the end of the mourning period a month later, and a funeral potlatch (*cə k'a'*) the following winter. At the potlatch he assumes his uncle's highest ceremonial name, succeeds to his chiefly position, and weds his widow.

Between a maternal uncle and his niece (*nat*) there prevails, from the puberty of the latter to her marriage, a strict barrier of reserve which greatly restricts conversation between them and in H prevents it entirely. A niece may succeed to her uncle's position as house chief if he dies without leaving male heirs; in this rare event she discharges the mortuary obligations precisely as would a nephew.

4. 'au (M and H), 'a'uga (S). Voc.: 'a'wa (M), 'a'wa' (H), 'a'wa'i (S). Pl.: 'a'u'ləŋ (M), 'a'u'ələŋ (H), 'a'ugaləŋ (S). Primary meaning: "mother" (m. and w. sp.).

The term applies equally to own mother, stepmother, adoptive mother, and mother's sister. It also applies to father's brother's wife—always in M and H, in S only if she belongs to the speaker's clan. In its extended sense, it refers to any clanswoman of the first ascending generation. Only rarely is it extended to women of other clans in the same moiety, and in this case a different form of vocative is employed: *di 'au' 'isʌs* (M), etc. The plural constitutes an exception, however, for it denotes any or all older women of the speaker's moiety.

A daughter (*g̱ət* or *gudja'ŋ*) lives with her mother until marriage and usually even thereafter, following her if she is divorced from the father. She helps the mother in her work—cooking, picking berries, slicing and drying fish, making mats and baskets, etc. She inherits the property of her mother at the latter's death, and if her mother was a shaman or seer she succeeds to that position. Either gives the funeral feasts to the opposite moiety at the other's death. A few days after the birth of a girl, the mother, after consultation with the father and the four grandparents, gives her a name—that of a deceased woman of the mother's clan, whose soul is thought to be reincarnated in the child. The mother plays with her young daughter, disciplines her, and instructs her in the duties and activities of a woman. A girl is not necessarily consulted about her marriage, which is arranged for her by her mother, after consultation with her brothers and maternal uncles. After the wedding the mother makes the bride liberal presents of food, clothing, household articles, and sometimes even a slave to work for her. The Haida feel very strongly that the mother, having arranged the marriage, has a vital stake in its success; it is she, therefore, and not the in-

jured husband, who receives any damages that may be exacted from a man who commits adultery with her married daughter.

A son (*ġit*), until he moves to the house of his maternal uncle, lives with his mother, fetches water and firewood for her, and helps her in gathering roots, berries, and seaweed. She names him, as in the case of a daughter, plays with him, tells him stories, instructs him in the proper behavior toward his various relatives, and reprimands or punishes him for his misdeeds. When she decides that he is of marriageable age, she selects a suitable girl, discusses her choice with her husband, brothers, and other immediate relatives, secures the consent of the boy, and then proposes marriage to the mother of the girl.

Descent is matrilineal. Status, or rank in the complicated Haida system of social classes, is not, however, hereditary at all. Neither can it be obtained for a person by his own activities, many statements in the literature to the contrary notwithstanding. A Haida can possess status only if his parents have potlatched, and the precise measure of his status is determined by the number and quality of his parents' potlatches. Of the various types of potlatch, that which confers the greatest degree of prestige is the 'wa'fal or house-building potlatch, which is given by a woman in collaboration with her husband, and which secures for their children the rank of 'ya'ε't or "noble." Having conferred status upon her children, a mother feels obligated to maintain it. Thus if a child has been humiliated in any way, e.g., by falling from a canoe into the water and being helped out by a member of the opposite moiety, the mother gives a small potlatch of the *ciŋa'dα* or "face-saving" type, after which no one may recall the incident.

The relationship between a maternal aunt and her nephews and nieces parallels closely that between a mother and her children, as is comprehensible under a system of matrilocal residence where the mother and her sisters are housemates.

5. 'γɔŋ (M), 'hυη (H), ġo'ŋġa (S). Voc.: 'γɔ'ŋa (M), 'hυŋa' (H), ġoŋġa'i (S). Pl.: 'γɔ'ŋα'laŋ (M), 'hυ'ŋαlaŋ (H), ġo'ŋġalaŋ (S). Primary meaning: "father" (m. sp.).

The term is employed for own father, stepfather, and adoptive father. It is also applied to mother's sister's husband, although in H the term *ye'i* (father's brother) is preferred. In the whole Haida system of consanguinity no term has undergone so little extension as that for father. In S, to be sure, where the term for father's brother is lacking, *ġo'ŋġa* is extended to any man of the father's clan and generation, and in M and H a similar extension has begun to take place within the memory of the author's informants. Although many of the younger people in M and H are beginning

to call the men of their father's clan and generation "father," this usage is recognized as incorrect, and "father's brother" is still actually the commoner term. With these exceptions the only extension is the usual one of the plural, which refers to the men, especially the older men, of the father's clan.

Durlach<sup>5</sup> reports that the term "father" is employed for father's sisters' son and for father's sister's daughter's son. This is incorrect. The informants in all three villages laughed to scorn the idea that a man of the speaker's own generation, much more of the first descending generation, could be called "father." Durlach was led astray by her informant, an educated native who has identified himself with an alien race and has chosen to spend his life in a region remote from his people. That he has lost contact with his native culture is shown by other misstatements, e.g., that a father's brother's wife and a mother's brother's wife lie "outside the relationship system,"<sup>6</sup> and by certain discrepancies in his genealogy, discovered by the present writer in checking it over with Amos Russ, the father-in-law of Durlach's informant and the oldest man in Skidegate. In the present instance, he had simply forgotten the term for male cross-cousin ('lga'nga), as Durlach<sup>7</sup> herself indicates, and also the alternative compound term go'ngana'tga (father's nephew), and supplied the term for father instead. Unfortunately, on the basis of this misinformation Durlach<sup>8</sup> arrives at certain far-reaching conclusions, which naturally lose their validity with the disappearance of their factual support.

A son (ġit) lives with his father until about ten years of age, accompanies him on fishing and hunting trips, when he helps by cooking, tending the fire, drying fish, etc., and imitates on a small scale or so far as he can everything that his parent does. The father makes model canoes, miniature bows and arrows, and tiny totem poles for his boy to play with, instructs him in masculine activities and handicrafts, and disciplines him in moderation. If the son gets into difficulties requiring the payment of property in composition of blood revenge, it is in S the father's duty to raise the fine if he can, and in H the maternal uncle's duty, whereas in M the uncle pays and the father contributes. A father, by the 'wa'lal or house-building potlatches which he gives in collaboration with the mother, and to a lesser extent by the cα k'a' or funeral potlatches which he gives by himself, obtains social status for his sons, and the desire thus to advance one's children is the dominant incentive to industry and thrift in Haida society.

<sup>5</sup> *Op cit*, pp. 105, 107, note 1, 110, 112

<sup>6</sup> *Ibid.*, pp. 105, note 4, 111.

<sup>7</sup> *Op cit*, pp. 107, note 1, 112

<sup>8</sup> *Ibid.*, pp. 110-15.

6. *ṣat* (M and H), *ṣa'tḡa* (S). Voc.: *ṣa'da* (M), *ṣada'* (H), *ṣada'i* (S). Pl.: *ṣa'dα'λαη* (M), *ṣa'dαλαη* (H), *ṣa'tḡαλαη* (S). Primary meaning: "father" (w. sp.).

The usage, for a woman speaking, precisely parallels that of *'ḡᵛη* for a male speaker. Furthermore, in M at least, the plural may be used (w. sp.) for parents.

A daughter (*ḡit* or *gudja'η*) lives with her father until her marriage and even thereafter unless her husband is a house chief or the heir apparent to a chiefship. During her girlhood the father plays with her, makes toys for her, etc., but puberty brings a sharp change in the relationship. Thenceforth they avoid one another, conversing either not at all or only when absolutely necessary. With the daughter's marriage the taboo is considerably though not entirely relaxed. In S the avoidance is rather less strict than in M and H but is never relaxed. A father's authority over his daughter ceases at her puberty, for thereafter he would be ashamed to display it. A father's potlatching confers social status upon his daughters as upon his sons.

7. *ye'* (M), *ye'i* (H), — (S). Voc.: *ye'* (M), *ye'i* (H), — (S). Pl.: *ya''λαη* (M), *ya''αλαη* (H), *ya'ḡαλαη* (S). Primary meaning: "paternal uncle" (m. and w. sp.).

From father's own brother the term is extended to other men of the father's clan and generation, to clansmen of the father in the second ascending generation, and on solemn or ceremonial occasions to an older man of the speaker's generation in the father's clan and to an older man in the opposite moiety in a clan other than the father's. None of the above uses its found in S, where the term is used only in the plural, referring in this form, as in M and H, either specifically to the speaker's parents or in a very extended sense to the members of the opposite moiety irrespective of sex and generation. Durlach<sup>9</sup> gives a S singular, *yäḡi*, used in the sense of the plural for "parent, forebear, ancestor." Although the present writer neglected to verify this statement, he feels that it is probably correct; on analogy, however, he would expect the form *ya'ḡai*. In view of the lack of the singular and vocative forms in S, at least in the primary sense of paternal uncle, it is interesting to note that the term is today losing ground in M and H. Though still recognized as correct, it shows a marked tendency, among the younger generation, to be supplanted by *'ḡᵛη* (father) except on solemn and ceremonial occasions.

The decline of the term is very possibly correlated with the comparatively slight social importance of the relationship it expresses. When a man

<sup>9</sup> *Op. cit.*, p. 107.

is ill, all those who call him *ye'* visit him to wish him a speedy recovery, and between a paternal uncle and his niece (*'wv'c'vη*) there exists a marked degree of reserve. But otherwise the relationship involves little of sociological importance.

8. *sq'a'n* (M), *sq'an* (H), *sq'a'nga* (S). Voc.: *q'α'na* (M), *sq'ane'* (H), *sq'a'na'i* (S). Pl.: *sq'a'nα'lαη* (M), *sq'a'nαlαη* (H), *sq'a'ngalαη* (S). Primary meaning: "paternal aunt" and "father's sister's daughter" (m. and w. sp.).

The term is extended from father's sister to all the women of the father's clan and generation, and from father's sister's daughter to all the women of the speaker's generation in the father's clan. It does not apply to a female cross-cousin on the mother's side unless she happens to belong to the father's clan. In M, but not elsewhere, it is used for a father's clanswoman in the second ascending generation, except the paternal grandmother who is always *na'n*. The term is also considered correct for a clanswoman of the father in the first and second descending generations, but it is rarely thus used in practice and only once appears in this sense in the author's genealogies. Another term is always preferred if the woman in question belongs to the spouse's clan or a closely associated one or if her father is a member of the speaker's or an associated clan. A woman of the opposite moiety but not of the paternal clan is called *sq'a'n* if she were brought up with the speaker's father in the same house, and the plural is extended to the women of the opposite moiety irrespective of clan and generation. With these two exceptions, however, the term is confined to the father's clanswomen. The compound descriptive terms *da'g'it* (brother's child) and *q'a'g'it* (maternal uncle's child) have today almost entirely superseded the older denotative term *'wv'c'vη* as reciprocals of *sq'a'n*.

Lowie<sup>10</sup> has suggested the term "amitate"—on the analogy of "avunculate"—for a special relation between a person and his paternal aunt. The Haida furnish an excellent illustration, albeit they extend the relation to the female cross-cousin on the father's side. At every crisis in the life of an individual his *sq'a'na'lαη* play an important rôle, and they usually receive compensation for their services in the form of presents. When a child is born, its *sq'a'n* cuts the umbilical cord with a knife—one used by the father in the case of a boy, by the mother if a girl—and afterwards secretes the knife in some dry place outdoors, e.g., under the roots of a spruce tree. She ties the cord with a string made from cedar bark and dresses it with powdered charcoal to cause it to heal rapidly. She cleans out the infant's mouth with

<sup>10</sup> AA 34 534, 1932.



her finger, feeds it a little eulachon grease, gives it a drink of tepid water, greases its body, bathes it in warm water, and places it in the cradle. Then she collects the afterbirth and the bloodstained bedding and clothing and burns them. It is the sq'a'n who tattoos a child at the house-building potlatch given by its parents, and who pierces its earlobes and nasal septum—in the case of a girl also her lower lip for the labret—at a funeral potlatch given by its father. When a girl reaches puberty (t'a'gwuna) she is secluded, usually for a month, behind a screen or sail in her parents' house. Here she is visited daily by her sq'a'na'laη, who talk to her, cook and care for her, and at the end of the period bathe her, dress her in new garments, and burn the soiled bedding and clothing. She gives away to them all the toys, trinkets, and clothes of her girlhood, and at her "coming-out" feast they receive valuable presents from her mother. At a wedding the sq'a'n of the groom conducts the bride to him, seats her by his side, and by this act seals the union. It is she, moreover, who gives the wedding feast immediately after the ceremony. When a person is ill, his sq'a'n takes care of him, and when others leave the village, e.g., for the salmon season, she remains behind to tend him. When the patient lies at the point of death, his sq'a'na'laη bring out all his property, drape it on the wall behind the bed, and pile it on the floor. Though other relatives come to visit, none but a sq'a'n may touch the patient. Immediately after death the eldest sq'a'n bathes the body, dresses it in fresh clothing, smears the face with deer grease and decorates it with red stripes, wraps the body in mats, furs, or ceremonial blankets, places a dancing hat on its head, and props it on a box in the seat of honor behind the fireplace, where it remains in state for four days. The sq'a'na'laη in relays keep a vigil over the corpse for four nights, and after the funeral they burn the clothes, bedding, utensils, and all other articles contaminated by contact with the deceased during his last illness.

No restriction is placed upon sex relations between unmarried persons of opposite moieties and similar ages, and this holds true particularly of a young man and his sq'a'na'laη. If the girl becomes pregnant, her mother and sisters take the matter up with the mother and maternal uncles of the boy, who is then compelled to marry her. In any case, the preferred marriage is with a sq'a'n of the same generation, though not necessarily a first cousin. A nephew who is in line to succeed to a chiefship, however, usually marries his q'a'git, i.e., the daughter of the maternal uncle whose place he is to take.

A man is under a special obligation to protect his sq'a'n from insult and injury. For any service, favor, or gift received from a sq'a'n, a man or woman must make a return present of greater intrinsic value, although,

according to one M informant, such a return is necessary only for a solicited favor. A sq'a'n has the right to ask her 'wu'c'uη for any object the latter owns, and it must be given her without expectation of any return. At a feast, double portions of food are always served to the sq'a'nα'lαη of the host. When a man and his wife entertain the sq'a'n of either at a meal, they heap the board with quantities of food—boxes of grease and berries, etc., none of which have been opened before—and after the guest has left they send all the remains of the food to her house. When they are entertained in return, they similarly receive the left-over food, but they are further obligated to send a valuable present back with the dishes.

9. 'lan (M), 'la'αna (H), 'llgα'nga (S). Voc.: 'la'ne (M and H), 'la'nai (S). Pl.: 'la'nα'lαη (M), 'la'αlαη (H), 'llgα'ngalαη (S). Primary meaning: "male cross-cousin" (m. and w.sp.).

The term is applied to the father's sister's son, from whom it is extended to all the men of the father's clan in the speaker's generation. It is also used, at least in M and H, for male cross-cousins on the mother's side, i.e., for the son of any man of the mother's clan and generation. The author's principal S informant insisted that it cannot be used for a q'a'ga'it'ga (maternal uncle's son) unless he happens to belong to the father's clan. There is other conflicting evidence on this point, and the author feels incompetent to decide whether the term referred originally to male cross-cousins in general or, like sq'a'n, only to those on the father's side. In the plural it is used for the younger men of the opposite moiety irrespective of clan, and of the descending generations as well as of that of the speaker.

Durlach's<sup>11</sup> speculation about this term, to the effect that it may represent a special relationship of the joking type established by the impersonation of supernatural beings in some ceremony, lacks any foundation in fact. It arose from her erroneous information concerning the use of the father-son terminology for cross-cousins.

The relationship with a 'lan parallels in many respects that with a sq'a'n. Male cross-cousins assist the female in tattooing. A woman's labret is made by her 'lan. An unmarried girl may have sexual relations with her 'la'nα'lαη, and she eventually marries one of them. When a person dies, his 'la'nα'lαη construct the coffin, assist the sq'a'nα'lαη in arranging the body and keeping the nightly vigil, and at the funeral carry the corpse out through an artificial aperture in the side of the house and deposit it in the grave, burial house, or mortuary column. At a feast a 'lan is given double portions of food. An article for which he asks must be given to him without

<sup>11</sup> *Op. cit.*, p. 112.

expectation of remuneration. When a man returns from a hunting or fishing trip and lands on the beach with his canoe, his 'la'na'ləŋ are privileged to help themselves as they like from his catch of fish, game, or furs, and he can raise no objection. Male cross-cousins watch over and protect one another. If a man gets into trouble, e.g., his canoe drifts away in a storm, it is his 'lan who goes to his aid or rescue, rather than his brother, son, or nephew. For this, as for all services and gifts from a cross-cousin, a valuable present is expected in return.

The term is everywhere falling into disuse today, being gradually supplanted by the compound descriptive terms 'ɣɔŋna't, ɣatna't, and q'a'g̃it.

10. 'wu'c'vən (M), 'wu's'wən (H), 'wusg̃u'nga (S). Voc.: 'wu'c'vənai (M), 'wus'wəne' (H), 'wusg̃u'na'i (S). Pl.: 'wuc'v'na'ləŋ (M), 'wus'wu'naləŋ (H), 'wusg̃u'ngaləŋ (S). Primary meaning: "cross-cousin" and "brother's child" of either sex (m. and w.sp.).

This term, which is unquestionably the same as Swanton's sgū'nga and Durlach's ho'sgonai, is losing ground today in H, is rare in S, and is obsolete in M, where it is remembered only by the oldest inhabitants. It was not given spontaneously in the genealogical lists and was elicited only by questioning the informants, who did not always act as though they were certain of its definition. Only partial reliance, therefore, should be placed on the following statements. The term seems to be most commonly employed (m. and w.sp.) for the son or daughter of a brother, being in this sense reciprocal with sq'a'n and ye'. It is likewise used (w.sp.) for the son or daughter of a maternal uncle (q'a), being reciprocal here with sq'a'n. It is also said to be applied (m. and w.sp.) in M and H to a sq'a'n of the speaker's generation as distinguished from other sq'a'na'ləŋ. There is conflicting evidence as to whether it can be used (m.sp.) for a 'lan. It is certainly not applicable to persons of an ascending generation. In modern usage it is ordinarily replaced by the compound descriptive terms q'a'g̃it, da'g̃it, k'wa'ig̃it, do'ng̃it, 'ɣɔŋna't, and ɣatna't. For the sociological implications of the relationship, see under sq'a'n and 'lan.

11. k'wai (M and H), k'wa'iga (S). Voc.: gwa'ye (M and H), gwa'iyai (S). Pl.: k'wa'i'ləŋ (M), k'wa'iləŋ (H), k'wa'igaləŋ (S). Primary meaning: "elder brother" (m.sp.) and "elder sister" (w.sp.).

As used by a man, the term is extended from own elder brother to a father's brother's son, a mother's sister's son, and a fellow clansman of the same generation, in each case referring to a man older than the speaker. The usage by a woman in reference to an older woman of the speaker's generation is identical. Sometimes the term is used for an older person of the speaker's sex and generation in another clan of the same moiety, but

usually a different form of the vocative is employed: *di k'wa'i'ists* (M), etc. The plural is used for two or more brothers or sisters, and, in a very extended sense, for the men (m.sp.) or the women (w.sp.) of the speaker's moiety, irrespective of clan and generation.

The relation between two brothers is friendly and coöperative, but lacking in the excessive intimacy of a joking relationship. They fish, hunt, and engage in other activities together. They make frequent presents to each other. Either has the right to ask for a possession of the other as a gift, and he cannot be refused. An elder brother is consulted about the marriage of his junior. The relationship between sisters runs parallel on all these points. The younger brother (do n) helps the elder to accumulate property for a house-building potlatch, and the elder later reciprocates. Sometimes, in M and H but not in S, two brothers combine their resources and give a house-building potlatch together. Very commonly the younger brother lives with the elder. When a clan or house chief dies, he is succeeded by his younger brother; by a nephew only in default of own brothers. An inheritance is never split; although small objects of personal property may be distributed among several brothers and nephews, all privileges and all property of importance descend *in toto* to the next of kin. Where a younger brother is the heir, he gives the funeral potlatch, erects the mortuary column, takes the potlatch name, and weds the widow of his predecessor precisely as does a nephew. The levirate prevails among the Haida only in the case of chiefs. At a woman's death, her property descends to her sister only in default of daughters; a daughter, however, customarily makes gifts from the inheritance to her mother's surviving sisters.

12. do'n (M and H), do'ḡaṅga (S). Voc.: do'ne (M and H), do'nai (S). Pl.: do'na'laṅ (M), do'nalaxṅ (H), do'ḡa'galaxṅ (S). Primary meaning: "younger brother" (m.sp.) and "younger sister" (w.sp.).

This term, in its use and extension, exactly parallels *k'wai*, except that it refers to a person younger instead of older than the speaker. The plural, however, refers particularly to the younger men of the speaker's moiety (m.sp.) or to the younger women (w.sp.).

13. da' (M and H), da'ḡa (S). Voc.: da'ai (M), da'e (H), daḡa'i (S). Pl.: da''laṅ (M), da''alaxṅ (H), da'ḡalaxṅ (S). Primary meaning: "brother" (w.sp.).

From own brother, either elder or younger, the term is extended to father's brother's son, mother's sister's son, and any man of the speaker's clan and generation. For a man of the speaker's generation in another clan of the same moiety a different form of the vocative is usually employed:

di da' 'usis (M), etc. The plural is extended to all the men, or the younger men in particular, of the speaker's moiety.

A brother and sister (djas) play together as children, but with the puberty of the latter a period of strict avoidance begins. They may not wrestle together or otherwise come into close physical contact. Neither is permitted to sit or lie on the other's bed. They do not even converse together. After the sister's marriage the avoidance is tempered to a moderate reserve, which forbids only undue joking and physical intimacy. In S, usage differs slightly from M and H, in that the avoidance is rather less pronounced and does not terminate with the sister's marriage. Brothers and sisters assist one another at feasts and potlatches, and attend festivities together. A married woman takes pride in entertaining her brother and his wife both frequently and lavishly. In particular, during the entire winter following the brother's marriage, his sisters in rotation entertain the newly wedded couple in their homes. Either the brother or the sister may ask for anything the other possesses, and cannot be refused: as in all similar cases, however, this right cannot be abused without loss of prestige. When a woman dies, her eldest surviving brother gives the funeral potlatch.

14. djas (M), djas (H), dja'ga (S). Voc.: dja'se (M and H), dja'sai (S). Pl.: dja'sa'laη (M), dja'salaη (H), dja'sga'laη (S). Primary meaning: "sister" (m.sp.).

From own sister, either elder or younger, the term is extended to father's brother's daughter, mother's sister's daughter, and any woman of the speaker's clan and generation. For a woman of the speaker's generation in a different clan of the same moiety the vocative di dja's 'usis (M), etc., is employed. The plural is applied to all the women of the same moiety, or more particularly to those of about the speaker's age. For the relationship between sister and brother, see under da'.

15. 'alnaηq'a's (M, H, and S). Voc.: (di) 'alnaηq'a's (M, H, and S). Pl.: 'alnaηq'e'yawas (M, H, and S). Primary meaning: "child of father's clansman" (m. and w.sp.).

Except for the M and H vocatives and plurals, the forms given above are open to suspicion. The singular probably differs slightly from the vocative. After one vain attempt to elicit a different form from one M informant, the author gave it up and carelessly neglected to come back to the subject. The S forms probably differ from those of M and H.<sup>12</sup> They were recorded when an S informant agreed with the M forms, with which he was certainly familiar, and again the author neglected to pursue the subject further.

<sup>12</sup> Cf. Durlach, *op cit*, p. 109.

The term refers to a person of either sex whose father belonged to the same clan as the speaker's father, but it is never used for a member of the speaker's own clan. It is not confined to persons of the speaker's generation.<sup>13</sup> The term is most commonly used between men, much more rarely by women or by men with reference to women.

Between two men the relationship is one of excessive intimacy and license. Like two brothers, they hunt and fish together, and have the right to ask each other for articles of property. When one is in trouble, the other comes to his assistance. If one contemplates an adventure or lark of any kind, e.g., to keep a tryst with a pair of unmarried girls, he will ask his 'alnəŋq'a's to accompany him in preference to any one else. The most striking feature of the relationship is the license it permits. The two men play practical jokes upon one another. Like college roommates amongst ourselves, they heap insults and scurrilous language upon each other without ever taking offense. One will even, in jest, employ the most potent rites of black magic against the other in the latter's presence. The joking does not cease even on the deathbed. In one reported case, for instance, a younger man, while visiting his aged 'alnəŋq'a's as the latter lay seriously ill, happened to notice some attractive food and immediately offered aloud a prayer for his friend's speedy demise so that he himself might enjoy the victuals. In S this license, though prevalent, does not go to quite such extremes as at M and H.

Between women the relationship is much less prominent, but a similar license in a milder form does prevail. Between a man and a woman liberties are inhibited between the puberty and marriage of the latter by a taboo similar to that between brother and sister. After the woman's marriage, however, at least in M, a moderate amount of joking, unconventional language, and even physical intimacy is allowed.

16. ḡt (M and H), ḡt'ḡa (S). No vocative. Pl.: ḡt'də'ləŋ (M), ḡt't'aləŋ (H). Primary meaning: "child" (m. and w.sp.).

When a vocative form is required, resort is had to a term of etiquette, particularly lq'an and di'naŋ.

The term is used by either a man or a woman for his own son or daughter; if it is desired to emphasize that the child is female, gudja'ŋ is employed instead. The term is extended to all persons of either sex in the first descending generation of the speaker's own clan (w.sp.), or of the wife's clan (m.sp.), except that the descriptive terms k'wa'ḡt and do'ngt are preferred for a man's brother's child. Occasionally the term is extended, in H and S but

<sup>13</sup> *Contra* Durlach, *op. cit.*, p. 109.

not in M, to persons of the first descending generation in other clans of the child's moiety. The plural is used by old men to refer to persons of the opposite moiety irrespective of clan and generation, and by old women similarly for members of their own moiety. For the relations between a child and his father, mother, paternal uncle, and maternal aunt, see under 'γɔŋ, xat, ye', and 'au.

17. gudja'ŋ (M), gudja'ŋa (H), gudja'ŋga (S). No vocative. Pl.: gudja'ŋa'laŋ (M), gudja'ŋa'laŋ (H), gudja'ŋga'laŋ (S). Primary meaning: "daughter" (m. and w.sp.).

This term may be substituted for *gɪt* wherever the latter is used for a female. There is, however, no tendency to employ gudja'ŋ regularly for "daughter," reserving *gɪt* for "son." The latter carries no implication of maleness, and is always used for daughter unless an adequate reason exists for specifying sex.

18. nat (M and H), na'tga (S). Voc.: na'de (M and H), nada'i (S). Pl.: na'da'laŋ (M), na't'alaŋ (H), na'tga'laŋ (S). Primary meaning: "sister's child" (m.sp.).

From the son or daughter of an own sister, the term is extended to any person of either sex in the first descending generation of the speaker's clan, and also to a clansman of either sex in the second descending generation except an own grandchild, who is always called t'a'k'an. For a member of a descending generation in another clan of the speaker's moiety a special vocative form is employed: di na't'isis (M), etc. The plural is used—by older men only—to refer to the members of the speaker's moiety irrespective of clan and generation. For the relationship between a sister's son or daughter and the maternal uncle, see under q'a.

19. t'a'k'an (M and H), t'a'k'ingga (S). Voc.: t'a'k'ane (M), t'a'k'ane' (H), t'a'k'inai (S). Pl.: t'a'k'an'a'laŋ (M), t'a'k'an'a'laŋ (H), t'a'k'in'ga'laŋ (S). Primary meaning: "grandchild" (m. and w.sp.).

The term is always used by both sexes for an own grandson or granddaughter, the child of either a son or a daughter. It is extended to any person of the opposite moiety in the second descending generation, except that a woman usually calls those in her husband's clan tla'lnat and that a man preferably uses na'tgɪt for the child of his sister's son. It is also extended to persons of the speaker's own moiety in the second descending generation, except that a man employs nat for those of his own clan. Frequently in M and occasionally in H the term is further used for a person of the first descending generation in the speaker's moiety but of another clan. Finally, it can be used as a friendly term of address for any boy or girl, irrespective of kinship affiliation, who is young enough to be a grandchild. The plural is

employed by the old men and women in reference to the boys and girls of both moieties. For the relationship between a grandchild and his grandfather or grandmother, see under *tc'an* and *na n*.

#### PRIMARY TERMS OF AFFINITY

20. *tla-l* (M and H), *tla 'lga* (S). Voc.: — (M and H), *tla-'lai* (S). Pl.: *tla-'la'laη* (M), *tla-'la'laη* (H), *tla 'lgalaη* (S). Primary meaning: "husband" (w.sp.).

The term means own husband, and is never extended. The vocative is missing in M and H, where *dja* ("wife") is said to be employed instead. For the relationship between husband and wife, see under *dja*.

21. *dja* (M and H), *dja'ga* (S). Voc.: *dja* (M and H), *dja'ga'i* (S). Pl.: *dja''laη* (M), *dja''laη* (H), *dja'galαη* (S). Primary meaning: "wife" (m.sp.).

The vocative is also familiarly used (w.sp.) in M and H for husband. The term is confined to own spouse, and is never extended.

Friendship, mutual respect, and a spirit of coöperation characterize the relation of husband and wife. Custom, to be sure, assigns to each an economic sphere of his own, but a husband does not feel it beneath his dignity to assist his wife in cooking, gathering seaweed and berries, and other feminine duties when she needs help. They discuss all their plans together, but neither seeks to interfere with or direct the activities of the other. The husband exercises at best but a mild authority, and he is ashamed to display even this in the presence of others. A man and his wife may berate or scold each other, but a resort to physical violence, even under great provocation, is considered exceedingly bad form. A husband has neither the duty nor the right to avenge an injury to his wife; indeed, if his own clan is responsible, he himself shares in the liability to make reparation to her clansmen. A woman holds property independently of her husband. She receives equal treatment at feasts. She coöperates with him on at least a plane of equality in giving a house-building potlatch. She can participate freely in her clan councils, be a shaman, or even, in exceptional cases, hold a chiefship in her own right. In short, she enjoys a comparatively high status, and is far from being, as Durlach<sup>14</sup> states, "an utterly negligible quantity socially and politically."

Swanton<sup>15</sup> makes one of his rare misstatements when he says: "Even husbands and wives did not hesitate to betray each other to death in the interests of their own families." Actually, they both do their best to settle

<sup>14</sup> *Op. cit.*, p. 102

<sup>15</sup> *Contributions to the Ethnology of the Haida*, p. 62



a dispute which arises between their respective clans. If a decision becomes necessary, a wife will cleave to her husband against her own clansmen. In one case a wife threatened to humiliate her clan by giving herself to her husband as a slave unless an amicable settlement was arranged with his clan, and her threat produced the desired result.

Polygyny seems to have been comparatively rare. An aged M informant, who was already fully adult when the first missionary appeared, could recall only two cases, both clan chiefs, one with two wives and the other with three. An old S informant asserted that polygyny was a privilege, not of chiefs, but of men of high social status. A more frequent form of polygyny resulted, in the case of chiefs, from the levirate. The first wife always took precedence, but both were called *dja* and the children of both were equally privileged.

Marriage does not create an exclusive sexual monopoly; either party may have semi-sanctioned sex relations with a relative-in-law of the opposite sex to whom the term *il'no* is applied. The innocent spouse in such a case, however much he may disapprove, can take no action. But adultery—a liaison with any one other than a *il'no*—gives adequate grounds for divorce, although this rarely happens. An injured husband can take personal vengeance against neither his wife nor her lover; it is the wife's mother or sister who exacts damages from the adulterer. Sexual abstinence is enjoined between betrothal and marriage, during menstruation, and before hunting and war. During his wife's pregnancy a man must not trifle with other women, lest she die or have a difficult delivery, and he must carefully refrain from eating clams, crabs, and other foods gathered on the beach at low tide.

The Haida, although they use names commonly in reference to children, rarely do so in the case of adults. The avoidance of personal names appears to be merely a matter of etiquette rather than a taboo with a supernatural sanction. A married man or woman is usually called "husband (or wife) of So-and-so," or, if they have children, "father (or mother) of So-and-so." Other teknonymous usages are also in vogue, though less common, but no set rules seem to be followed.

A widow practices no mutilations at the death of her spouse. She remains as quiet and silent as possible for four days, and immediately after the funeral goes out into the bushes. A slave accompanies her, makes four rings out of brush, and slips these one by one over her head. She then steps out of the circle, and the slave places each ring over the stump of a different tree with a prayer that she may live long. She then takes a bath in the mud of a small stream and washes the mud downward off her body with

a similar prayer. This terminates her actual mourning. A widower observes precisely the same rites. Forms of both the levirate and the sororate exist. The widow of a chief must marry his heir. A widower usually weds an unmarried sister of his wife; otherwise a sister's daughter. Neither a widow nor a widower may marry outside the clan of his first spouse without special permission granted by that clan.

22. *dju na'n* (M and H), *djiḡona'ngā* (S). No vocative. Pl.: *dju·na'·nā'laŋ* (M), *dju·na'·nālaŋ* (H), *djiḡona'ngālaŋ* (S). Primary meaning: "mother-in-law" (m. and w.sp.).

The term is extended from the own mother of husband or wife to any woman of the first or second ascending generation in the spouse's clan. The plural, rather infrequently used, does not undergo any further extension.

Between a woman and her son-in-law (*q'wuna'*) a form of avoidance prevails. They must not come into physical contact or address one another directly. If she wants to scold him, she speaks ostensibly to her daughter, and if he wants her to do something, he asks his wife to ask her. In S, however, they may address each other, but only with great restraint and with averted faces. Despite the avoidance, they live together amicably enough. She cooks for him, he fetches firewood for her, and they assist one another in other ways. If a man deserts his wife and marries another woman, it is the mother-in-law who receives the indemnity. Between a woman and her daughter-in-law (*ḡutadja'*) there is no avoidance. Theirs is a friendly, co-operative relationship much like that between mother and daughter.

23. *q'wuna'* (M and H), *q'o'naga* (S). No vocative. Pl.: *q'wuna'·laŋ* (M), *q'wuna'laŋ* (H), *q'o'nāgalaŋ* (S). Primary meaning: "father-in-law" and "son-in-law" (m. and w.sp.).

The term is employed by a woman for her husband's father, her husband's father's own brother, her husband's mother's father, her daughter's husband, her daughter's daughter's husband, and the husband of any clanswoman of the first descending generation. By men it is used—always reciprocally—between wife's father and daughter's husband, wife's father's own brother and own brother's daughter's husband, and wife's mother's father and daughter's daughter's husband. The plural, used only by married men and women, is extended to all the men of the father-in-law's clan and associated clans of the same moiety.

A man, between his betrothal and his marriage, works for his future father-in-law and usually (except in S) also lives with him. For a period of from one to two years or even more he is under probation, as it were, to determine his fitness to support the daughter of the house. At the wedding the father-in-law gives the groom a rich present—a slave, a canoe, a "copper,"

or the like. Since residence is prevailingly matrilocal, a man at his marriage, if not before, goes to live with his father-in-law. He helps the latter in every way, e.g., building the fire each morning, fishing for him, etc. His father-in-law supplies him with weapons, food, and clothing for himself and his wife. The two men treat each other with marked respect. They converse but rarely and only with averted faces, and neither will joke or speak lightly in the presence of the other.

A daughter-in-law (*ġitɔdja'*) of a man is usually also his niece (*nat*), and in S the relationship between them is characterized by the same reserve as that between a woman and her maternal uncle (*q'a*). In M and H, however, this is replaced by a mild form of joking relation, like that between a man and his female *'alnαηq'a's*. The relationship between a woman and her son-in-law has already been described under *dju'na'n*.

24. *dju'na'* (M and H), *dju'nağa* (S). No vocative. Pl.: *dju'na''lαη* (M), *dju'na''αlαη* (H), *dju'nağalαη* (S). Primary meaning: "sister-in-law" (w.sp.).

When a vocative is needed, that of *sq'a'n* is usually employed. Usage in the case of this term differs in the three villages. In M it is applied to the husband's sister or her daughter and, by extension, to any woman whom the husband calls *djās* or *nat*, i.e., to any clanswoman of the husband in the speaker's or the first descending generation. It is not used reciprocally, the descriptive terms *da'dja* and *q'a'dja* being employed instead. In H, on the other hand, it is used not only in both M senses but also reciprocally instead of *da'dja* and *q'a'dja*. In S it is used reciprocally, precisely as in H, but it is further applied to son's wife, where it is reciprocal with *dju'na'n*. The plural refers to the women, particularly the younger women, of the husband's clan.

Sisters-in-law are friendly and coöperative like own sisters or mother and daughter. They help one another in giving feasts and in their routine labors, and they entertain each other frequently at meals. At a wedding the bride's *dju'na''lαη* shower her with presents of dishes, baskets, clothing, etc. For an entire winter following the wedding the groom's sisters, beginning with the eldest, entertain the bridal couple in rotation in their homes, and during this time they allow the bride to do no work.

25. *q'ε'* (M and H), *q'ε'ağa* (S). Voc.: *q'ε''e* (M and H), *q'ε'ağa'i* (S). Pl.: *q'ε''lαη* (M), *q'ε''αlαη* (H), *q'ε'ağalαη* (S). Primary meaning: "brother-in-law" (m.sp.).

This term is used reciprocally between a man and his wife's brother, his wife's maternal uncle, and, by extension, any man of the wife's clan of the speaker's or an ascending generation. It is also employed between a man

and the husband of a female 'aɫnαηq'a's. The plural refers to all the men of the wife's clan.

In H, but not in M or S, the term is also used by women, but in reference to women rather than men. Thus it is employed reciprocally between a woman and her husband's sister, her husband's sister's daughter, any woman of the husband's clan in the speaker's or the first descending generation, or the husband's female 'aɫnαηq'a's. The plural refers to the women of the husband's clan. As used by women in H, q'ε' is entirely synonymous with dʒɪnə', and it is slightly preferred to the latter as a warmer and more intimate term.

The relationship between brothers-in-law is characterized by mutual respect and a measure of formality. It lacks the intimacy of the relation between brothers and also the restraint of that between father- and son-in-law. The two men converse freely and even joke in moderation, but a definite undercurrent of reserve is always apparent. A man would be ashamed, for example, to ask his q'ε' to return a loan. They help one another in economic activities, and exchange presents from time to time. If one shoots a deer, makes a good haul of fish, or the like, he always presents a portion of his catch to the other, who is obligated to make some gift in return. After having dined by invitation at the house of his q'ε', a man must send a valuable present to his host in returning the dishes on which he received the remains of the food. An invitation from a sq'a'n is the only other similar occasion requiring a return gift. When the clans of the two men are engaged in a war or feud, they never personally fight against each other, but each seeks to protect the other from injury by his own clansmen.

26. ɪɫ'no (M and H), ɪɫ'naŋo (S). Vocative: ɪɫ'nawe (M and H), ɪɫnaŋwa'i (S), ɪɫ'nas (southernmost dialect). Pl.: ɪɫ'nawe'a'ηα (M), ɪɫ'nawe'ha'ηα (H), ɪɫna'ŋolαη (S). Primary meaning: "sister-in-law" (m.sp.) and "brother-in-law" (w.sp.).

This term is always used reciprocally and between persons of opposite sex. Thus it is applied by a man to his brother's wife and his wife's sister, and by a woman to her husband's brother and her sister's husband. It is also extended (m.sp.) to all women of the wife's clan and generation and (w.sp.) to all men of the husband's clan and generation. In M and H, but not in S, it is further extended (w.sp.) to all the men of the husband's clan and (m.sp.) to the wife of any q'a or nat. The plural is used by women for the men of the husband's clan and by men for the women, especially the younger women, of the wife's clan.

Between ɪɫ'no and ɪɫ'no there prevails a joking relationship of great intimacy and considerable license. They wrestle and play together very

freely. They make fun of, laugh at, and play practical jokes on each other, and maintain an attitude of mutual banter and good fellowship. They are also privileged to carry on sex relations, at least if they are of similar age, and particularly if one is unmarried. Thus a man regards his wife's younger and unmarried sister, who is of course usually a housemate, almost as a secondary wife. Such affairs are only partially, not fully, sanctioned by the mores. They are regarded much as drinking is in a country under Prohibition, namely, as something technically wrong perhaps but nevertheless to be expected, human nature being what it is. If they are carried on clandestinely, as is usually the case, it is to avoid the winks and smiles of tolerant amusement rather than the scowls of an outraged moral sense. A husband or wife is not infrequently jealous of his wayward spouse, but he usually keeps his eyes closed to avoid the ridicule in which a public exposure would involve him. In any case he is powerless to take action, for he has no redress against a clansman.

Under the prevailing forms of the levirate and sororate a widow or widower remarries a *li'no*. Remarriage with any one else requires the consent of the clan of the deceased spouse.

27. *s'wa'na* (M), *sə'wa'na* (H), *sḡwa'naḡa* (S). Voc.: *s'wa'na* (M), *sə'wa'na* (H), *sḡwa'naḡa'i* (S). Pl.: *s'wa'na'laŋ* (M), *sə'wa'na'laŋ* (H), *sḡwa'naḡalaŋ* (S). Primary meaning: "wife's sister's husband" (m.sp.) and "husband's brother's wife" (w.sp.).

The term is employed, always reciprocally, between two men of different clans who have married sisters and between two women who have married brothers. It is extended (m.sp.) to any man of another clan who has married a woman in the clan of the speaker's wife, and (w.sp.) to any woman of another clan who has married a clansman of the husband. It is never used for a member of the speaker's clan, and is in actual practice more used by men than by women.

The relationship is a friendly coöperative one differing in no important respects from that between sisters or brothers.

#### TERMS OF ETIQUETTE

Among the many Haida terms of etiquette it seems appropriate to notice briefly a few which are implicated with the social organization or kinship system. Those listed below are selected because they refer either solely or preferentially to members of a particular moiety or clan, or to definite kinsmen; in the latter case, especially in direct address where the proper kinship term lacks a vocative form. The terms are given only in the vocative, which is always the usual form and often the only one.

28. *tawi'* (M and H), *ta'xu* (S). Primary meaning: "friend" (m. and w.sp.). This term is used for a member of one's own moiety irrespective of sex, clan, and generation. It is sometimes extended to members of the opposite moiety, but never to non-Haidas.

29. *st'a'gul* (M and H only). Primary meaning: "guest friend" (m.sp.). The term applies to the partner in an artificial relationship established between clan chiefs in distant villages either of the Haida or of other tribes. The relationship can be established only with a chief of the same moiety, or of an equivalent phratry in another tribe, e.g., the Tsimshian. Each chief entertains the other lavishly in his home, makes him a handsome gift, and presents him with a privileged name from his own clan fund. Once begun in this manner, the relationship is maintained in perpetuity by the heirs of the original partners. One *st'a'gul* never engages in war against the other. The house of either is a sanctuary in which the other may find refuge and protection at any time. In former times it was only by taking advantage of this relationship that the Haida were enabled to carry on their extensive trade with the Tsimshian, despite the inveterate hostility of the two tribes. The term is also employed by courtesy, even where there is no hereditary compact, for a man of the speaker's moiety in a distant branch of the Haida or for a man of a corresponding phratry in another tribe.

30. *st'a* (S only). A polite term of address used by a man in speaking to a man of the opposite moiety, particularly to a clansman of the wife.

31. *dla* (S only). A respectful term used chiefly by women in addressing a man of the speaker's own moiety.

32. *dja'ne* (M and H), *djana'i* (S). In S this term is said to apply (m.sp.) specifically to a female cross-cousin on the mother's side, provided she does not belong to the clan of the speaker's father. In M and H it means simply "sweetheart," and is confined to women of the opposite moiety.

33. *gwvne'* (M), *gwvna'* (H and S). In S this is said to be a recent importation from M. The term is used (m. and w.sp.) in addressing or greeting any man or boy younger than the speaker. It is, however, usually applied by a woman to a man of her own moiety, and by a man to a man of the opposite moiety.

34. *gade'* (M and H only). A polite term of address (m. and w.sp.) for any girl or woman younger than the speaker in the opposite moiety.

35. *lq'an* (M and H), *lq'en* (S). This term is used as a vocative (m. and w.sp.) wherever *gat* (child) would otherwise be employed. It is also commonly applied (m.sp.) to persons of a descending generation in the opposite moiety and in clans other than that of the speaker's wife and

children, and (w.sp.) to persons of a descending generation in other clans of the speaker's moiety. Finally, it is sometimes applied by a man to children belonging to other clans of his own moiety, and by a woman to children of the opposite moiety except members of her husband's clan, who are called *tla'lnat*.

36. *di'na'η* (M and S), *di'nαη* (H). This term is used synonymously with *lq'αη* in all cases. It is rather more common than the latter in H, and less common in M and S.

#### COMPOUND DESCRIPTIVE TERMS

The Haida freely compound their primary terms of consanguinity and affinity to form descriptive terms. Almost the only combination which might be expected, but which does not exist, is *sq'a'ngit*. There seems to be operative a definite tendency to substitute descriptive terms for primary denotative ones, and this has resulted in the obsolescence of the latter in certain instances, e.g., *'lan* and *'wv'c'vn*. Since the descriptive terms are regularly formed, it will be necessary only to mention those in most frequent use and to cite the M forms alone.

37. *q'a'dja* (m. and w.sp.). Maternal uncle's wife.
38. *da'dja* (w.sp.). Brother's wife.
39. *sq'a'ntla l* (m. and w.sp.). Husband of a *sq'a'n*.
40. *'γɔ'ηnat* (m.sp.) and *xa'lnat* (w.sp.). Cross-cousin on the father's side.
41. *q'a'git* (m. and w.sp.). Cross-cousin on the mother's side.
42. *k'wa'igit*. Elder brother's child (m.sp.) and elder sister's child (w.sp.). For a younger brother's child (m.sp.) and a younger sister's child (w.sp.), *do'ngit* is similarly used.
43. *da'git* (w.sp.). Brother's child.
44. *tla'lnat* (w.sp.). Husband's sister's child.
45. *git'adja'* (m. and w.sp.). Daughter-in-law.

#### TABLES

The terms, individually defined above, may now be brought together in four genealogical tables in order to gain a perspective of the system as a whole. Table 1 shows the terms for a male ego, except those employed for relatives through the wife, which are given in Table 3. Table 2 similarly shows the terms for a female ego, except that those for relatives through the husband are arranged in Table 4. The M forms alone are listed, except in cases of divergence, when the variant forms are also given.







TABLE 3. GENEALOGY OF TERMS FOR WIFE'S RELATIVES

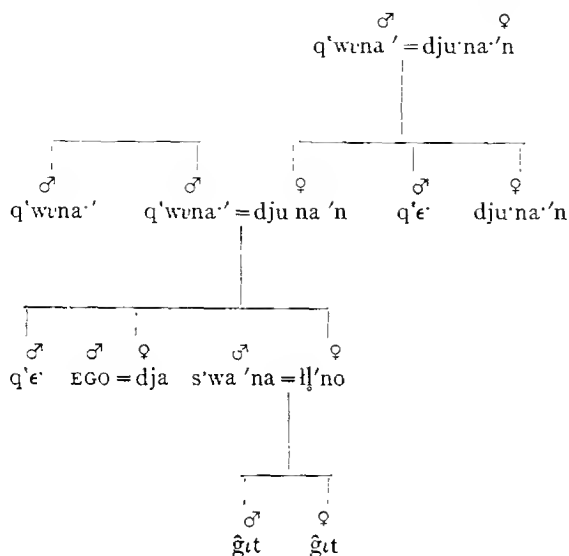
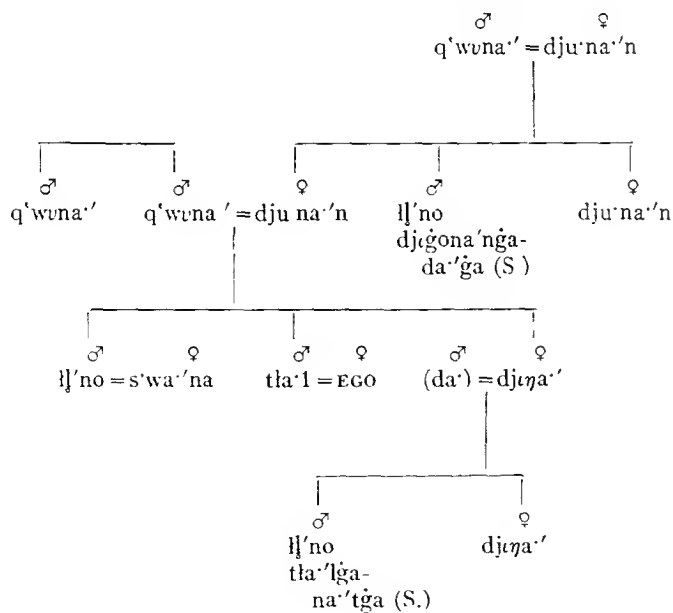


TABLE 4. GENEALOGY OF TERMS FOR HUSBAND'S RELATIVES



## CONCLUSIONS

The system as above described may be analyzed for comparative purposes on the basis of the criteria worked out by Kroeber<sup>16</sup> and Lowie.<sup>17</sup>

There is a well developed system of affinity in addition to that of consanguinity, and in general the two are kept rigidly distinct. Confusion occurs in only two important instances, in both of which a consanguine term is employed for a relative by marriage; namely, the use of "mother" ('au) for father's brother's wife and of "father" ('γγη) for mother's sister's husband.

In consonance with the dual organization into moieties with unilateral matrilineal descent, relatives through the father are regularly distinguished from similar relatives through the mother, e.g., paternal from maternal uncles and aunts. An important exception is to be noted in the second ascending generation, where tc'an and na'n refer respectively to grandfather and grandmother on either side.

The collateral lines are almost wholly merged in the lineal. Thus a mother's sister is called "mother," and her daughter is called "sister." Terms are ordinarily extended not only to the siblings of the relative in question but to all his clansmen of the same sex and generation. Two exceptions are to be noted to this rule. The term for "father" ('γγη) is not extended in M and H, and the term for "grandfather" (tc'an) is not extended when used for a paternal grandparent of the speaker's clan. Except in the cases of 'a'nαηq'a's and of tc'an when used for a younger clansman of the paternal grandfather, the extension even exceeds the confines of the clan and applies to members of other clans linked to the one in question by ties of traditional common descent or residence in a single village. A few terms, especially those for "grandfather," "grandmother," and "grandchild," are extended throughout the entire moiety. Durlach,<sup>18</sup> working with text material, has greatly underestimated the extent of merging in the Haida system.

Distinctions of generation are widely ignored in the system of affinity, where most of the terms are reciprocal. They are usually respected in the terms for lineal kinsmen. The terms for collateral relatives, notably q'a, ye, sq'a'n, 'wu'e'vn, and nat, tend to apply to at least two generations. Extreme instances of the disregard of generation are the use of tc'an for any male member of the paternal grandfather's clan irrespective of his age and the custom of calling a person who bears the name of a deceased

<sup>16</sup> A. L. Kroeber, *Classificatory Systems of Relationship*, JRAI 39: 77-85, 1909.

<sup>17</sup> R. H. Lowie, *Relationship Terms*, *Encyclopaedia Britannica*, (14th edition, London), 1929.

<sup>18</sup> *Op cit*, pp. 96, 98, 102.

relative by the kinship term once applied to the latter. Relative age within a generation is recognized only in the terms for siblings of the same sex (k'wai and do'n).

The sex of the speaker is distinguished in the terms for father, siblings, siblings-in-law, and sister's child. The sex of the relative is distinguished in all terms except those numbered 10, 15, 16, 18, and 19. The sameness of sex of speaker and relative is implicit in terms 11, 12, 24, 25, and 27. Oppositeness of sex is implied, other than incidentally, in H'no. The reciprocal use of a single term occurs with numbers 9, 15, 23, 24, 25, 26, and 27.

The system as a whole conforms to Lowie's "bifurcate merging" type. Spier,<sup>19</sup> on the basis of inadequate information, tentatively classes the Haida system under his "Crow type," the distinguishing characteristic of which is the alignment of cross-cousins on the father's side with the first ascending generation and those on the mother's side with the first descending generation. In actuality, however, the system departs radically from this pattern, despite the use of a single term (sq'a'n) for father's sister and her daughter and the reciprocal use of 'wu'c'en, and approaches much closer to the same author's "Iroquois type."<sup>20</sup>

Although speculation as to the history of a kinship system is ever a risky undertaking, the author feels that there is much to be said in favor of the reconstruction advanced by Durlach.<sup>21</sup> Her theory, in brief, is that the Haida system originated as an individual family system much like our own except that it disregarded sex in the descending generations. Then, with the introduction of the dual or moiety organization, came the necessity of distinguishing relatives on the father's side from those on the mother's, and bifurcation appeared with the narrowing down of existing terms and the introduction of certain new ones. Finally, with the development of the clan system, many terms were extended from particular individuals to all their fellow clansmen of the same sex and generation.

In details, to be sure, Durlach's theory may be open to question, and on certain points it is definitely wrong, e.g., her conclusions on cross-cousin terminology based on erroneous information. In its broad outlines, however, it has the support of a number of facts. That the terms for grandfather, grandmother, and grandchild show no cleavage along moiety lines, for example, seems best explained as due to their origin in a family system and their resistance to a later bifurcation into moieties. This would be more

<sup>19</sup> L. Spier, *The Distribution of Kinship Systems in North America*, UW-PA 1: 72-74, 1925

<sup>20</sup> *Ibid.*, pp. 77-78.

<sup>21</sup> *Op. cit.*, pp. 99-103.

difficult to account for under the assumption of an original thoroughgoing dual organization.

That the division into moieties is antecedent to, and more fundamental than, that into clans seems beyond all question. In origin the clan appears to be merely the localized segment of a moiety settled in a particular village. It is still possible to trace in many instances the various steps by which a migrating portion of a clan becomes successively a sub-clan, an independent clan retaining a traditional bond with the mother clan, and finally a distinct clan with no indication of the former connection except a common fund of crests. The reverse process is also traceable. One clan moves into a village inhabited by an entirely distinct clan of the same moiety. The two become allied in war. They participate in each other's councils. Their funds of crests gradually become merged. Eventually they become to all intents and purposes a single clan. Clearly the moiety is fundamental, the clan secondary and almost accidental.

In spite of its secondary nature, the clan has unquestionably exerted a strong influence in bringing about the extension of terms from lineal to collateral relatives. Only 'γɔŋ and tɕ'αn have been able partially to resist this tendency; the former only in Massett and Hydaburg, the latter only when used for a paternal grandfather of the speaker's own clan. The probable explanation of these exceptions lies in the very important social rôles of the lineal relatives in question, in which the collateral relatives do not share, for it is the father who confers social status through his potlatches and the paternal grandparent who contributes name and soul. The clan seems also to have operated strongly to override generation distinctions. Thus terms like q'a, ye, sq'a n, q'ɛ, and ɬ'no, once probably confined to a single generation, are now extended within a clan to two or more. Perhaps the amitate paved the way. If a sq'a n is to function at every crisis in the life of an individual, there must be sq'a 'nɔ'ɬɔŋ in at least three generations—a father's sister to bring him into the world as an infant, her daughter to minister to him in the prime of life, and her granddaughter to officiate at his funeral if he dies at an advanced age.

Other factors have doubtless also been operative in shaping the Haida system. Certain obscure linguistic influences probably lie behind the marked tendency, at least in recent times, to substitute compound descriptive terms for primary denotative ones. The notion of reincarnation, as already noted, has exerted a minor influence. Common residence or living together has probably been a significant factor. Thus the term sq'a n is applied to a woman, even if she does not belong to the father's clan, if she grew up as a child in the same household with the father. The differentiation in

terms between father's brother and father, but not between mother's sister and mother, is perhaps to be attributed to the fact that under matrilineal residence the last two are necessarily housemates while the first two are not.

The author admits the heresy of doubting whether diffusion has been a prominent factor directly in the evolution of the Haida kinship system. That there has been some borrowing of terms in the area is unquestioned. Sapir,<sup>22</sup> for example, has shown that the Haida term *ɣat* has been adopted by the Tsimshian. But the Tsimshian system follows a pattern radically different from that of the Haida, while the Tlingit system, despite a fundamental similarity in structure, reveals such thoroughgoing differences in details as to exclude the possibility of wholesale borrowing. In so far as diffusion has been a factor at all, it would seem to have been operative, not within the kinship system itself, but in the field of social organization in general, where it would have produced the similar conditions—phratries, clans, potlatch, privileges, etc.—to which the kinship systems of the several tribes have had independently to adjust.

However well or ill the facts in this paper may lend themselves to conjectural reconstruction of tribal history, they certainly present a striking example of the manner in which a native kinship system can permeate every phase of the life of a people and determine or canalize social behavior in widely ramifying situations.

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<sup>22</sup> E. Sapir, A Haida Kinship Term among the Tsimshian, *AA* 23: 233-34, 1921.

## A STUDY OF INDIAN MUSIC IN THE GULF STATES

By FRANCES DENSMORE

FOUR Indian tribes were included in a study of Indian music in the Gulf states, conducted by the writer during the winter of 1932-33. While the chief purpose of such work is the preservation of Indian songs, this undertaking had another purpose. A peculiar formation of melody had been found among the Yuma in 1922, later in songs recorded by Pueblo Indians, and in 1931-32 it was found in songs recorded by Florida Seminole in the Everglades and also in the northern group known as the Cow Creek Seminole, living near Lake Okeechobee. The same form, less developed, was noted in songs recorded by Tule Indians from San Blas, Panama, the records being made while they were in Washington, D.C., in 1924. This melodic form is characterized by a long initial period, or phrase, followed by a short period that is higher in pitch and usually different in rhythm and melody. One or more other periods may follow, and the first is repeated at the close. Any period except the second may be lengthened somewhat indefinitely by repetitions of the phrases in various orders. The present writer has called this a period formation of melody. Dr George Herzog and Miss H. H. Roberts use the term "the rise" to designate the same peculiarity.

In December, 1932, the writer went to Livingston, Polk County, Texas, to obtain songs from the Alibama Indians who live in a settlement about seventeen miles from that town, at the edge of the Big Thicket, in the long-leaf pine region. Conditions of snow, ice and rain prevailed and the roads were practically impassable, but after a few days Charles Martin Thompson, chief of the Alibama, came to Livingston and recorded more than sixty songs. He was born in Polk County and both parents were Alibama. A mission of the Presbyterian Church has long been conducted among the Alibama. He is a deacon in that church, but he remembers the old ways and said he "could record at least a hundred more songs."

Seventeen of his songs were those of the Buffalo and Corn dances, the others being connected with the Frog, Rabbit, Quail, Duck, Chicken, Horse and Terrapin dances, and with two very old dances by women. None of these melodies contained the period formation and it was not considered necessary to seek other singers. If the period formation had been used by the Alibama it is reasonable to suppose it would have occurred in so representative a collection, recorded by a reliable singer. The melodies were short and simple, without the thematic development that occurs in songs of many other tribes. They had an interesting tribal individuality, though the order in the Corn dance was the same that had been obtained from the northern Seminole. About fifty of the records were transcribed and the remainder carefully studied. His cedar flute was obtained.

The next tribe visited was the Chitimacha, living near Charenton, Louisiana. The chief, Benjamin Paul, and other prominent members of the tribe were interviewed but no songs could be remembered by them. Interesting information on musical customs was recorded, from which it appears that the customs were similar to those of other tribes. Songs were sung to make medicinal herbs effective; Benjamin Paul remembering that his grandmother, who was expert in the use of herbs, always sang when she dug the roots. He related the legend of the supernatural origin of the flute, and several stories in which songs formerly occurred, indicating the places of the lost songs and, in some instances, recalling the words.

Benjamin Paul said that he could understand the language of certain birds and that the writer's approach had been made known to him by the notes of a little bird resembling a "wild canary."

The Choctaw Indians (about 1650 in number), living near Philadelphia, Mississippi, continue many of their old customs. The first singer in this tribe was an old medicine man, known as Sidney Wesley. His Choctaw name means "Kills it himself" and was said to mean that if an animal were to be killed or some difficult task accomplished he did it himself.

The period formation was heard in the fifth song recorded by Wesley and in a number of successive songs. He had been asked to sing the oldest songs he could remember, and these were the songs that came first to his mind. He recorded more than thirty songs, and a similar number was obtained from other old men of the tribe. No comment was made on the period formation when Wesley recorded songs containing it, and he was left free to choose his songs: it occurred, however, in a considerable number of his later recordings. His songs were old, as shown by the words of one which mention antagonism toward the French and Spanish. A peculiarity of the Choctaw is the use of dance songs without any accompaniment. (This custom was noted in New Guinea by M. W. Stirling.) Such dances were witnessed: the songs were recorded by Lysander Tubby, the leading dance singer of the tribe. On studying the transcriptions of these songs it appears that a rhythmic repetition of a low tone occurs frequently and may take the place of an accompaniment in marking the time. A vocal rhythmic accompaniment is used with the Snake dance, as in other tribes where this dance has been witnessed, the dance being a form of "follow-my-leader." Certain dance songs are accompanied by the striking together of two short sticks, which the singers also used when recording their songs.

The tribal ball game was studied with Robert Henry who acted as leader of the medicine men at the last game, a number of years ago. The Choctaw used a drum on the day of a ball game and at no other time. There was no



singing while a game was in progress but the medicine men ("witches") pounded drums and blew on flutes to render their opponents unable to win. A song was sung on the night before a game to bring success: this was recorded by Henry. He said that each medicine man had two or three flutes of different lengths to blow during a ball game. The tones of his three flutes were recorded and one flute obtained for the National Museum.

The recorded Choctaw songs included those of the Stomp, Tick, Bear, Terrapin, Duck, Turkey, Snake, Quail and other dances, the songs connected with the moccasin game, and several interesting old war songs, one of which contained the words "My face is painted so they can not see me."

An interesting observation was made possible by the recording of repetitions of songs by the same and other singers, the former being on different cylinders, not consecutive. On comparing the several renditions it was found that the last was the simplest, all elaborations being omitted. This suggests that improvisation and elaboration of a melody may be a phase of Choctaw musical culture, as it is among the Tule of Panama.

At Brighton, Florida, the work was resumed with Billie Stewart, a leading singer at the annual Corn dance. He had recorded 125 songs the previous season and without hesitation sang 75 more. In the previous work he had distinguished the songs with period formation, calling them "long songs" and saying he could sing these or "the other kind" as desired. He recorded a considerable number of songs which are typical of those with period formation.

Two new singers were employed, one being the wife of Billie Stewart who is known by her maiden name of Susie Tiger. She is actively engaged in treating the sick and consented to record several songs which she uses in her treatment, describing the ailment for which she uses the song and the accompanying remedy. The other Seminole singer was Billie Bowlegs, a direct descendant of the famous leader of that name.

Among the Seminole songs were two concerning the removal of a portion of the tribe to Oklahoma in 1836-1840. One of these was in the period formation. Two interesting songs were sung to orphan children. Such songs have not previously been recorded but it is said they are used in Peru.

Mention may be made of a peculiar action of the throat, inadequately described as "swallowing the words." This was also heard by Mr M. W. Stirling among the Jivaro Indians in Brazil.

From the foregoing it appears that musical customs may corroborate the findings of ethnologists on former contacts of Indian tribes.

RED WING

MINNESOTA

SOME EMPIRICAL ASPECTS  
OF NORTHERN SAULTEAUX RELIGION<sup>1</sup>

By A. I. HALLOWELL

I

ONE of the intrinsic difficulties involved in the presentation of the religions of so-called "primitive" peoples is to make them rationally convincing. Indeed a few decades ago when the theory of evolutionary stages in religious development was in full swing, perhaps no one expected them to be. Primitive religions lay jumbled in an unassorted heap at the bottom of a genetic series topped by the "historic" religions in general and Christianity in particular. Besides, not much could be expected of primitive religions when so little was expected of primitive man. As contrasted with the maturity, logical mentality and well equilibrated personalities of civilized man, he was often conceived as childlike in character, pre-logical in mentality and psychotic in personality. To-day, however, with the total collapse of unilinear historical reconstructions, with the burden of proof on those who would demonstrate any but minor differences in racial mentality, whether quantitative or qualitative, to say nothing of the body blows which psycho-analytic theories have dealt the assumption of complete rationality in any man, the discussion of religious phenomena, it seems to me, cannot be profitably carried on except in terms applicable to all races, periods, and cultures. What I wish to do is to present the religious philosophy of the Pigeon River Indians as a living reality, as a relatively coherent and self-contained system of beliefs and customs and particularly to indicate in what measure the knowledge and personal experiences of individuals reared in this cultural milieu lend rational support to their religious beliefs and practices.

The Indians I have been studying for the past two summers inhabit the environs of the Berens river which rises in western Ontario and flows westward through the province of Manitoba into Lake Winnipeg at an approximate latitude of 52°N. In native terminology it is called *omim'sipi*, pigeon river.<sup>2</sup> The Pigeon River Indians depend upon hunting and fishing for their living, supplemented by the limited resources which the wild plants of their environment afford. Linguistically they belong to the Ojibwa branch of the far flung Algonkian stock, although locally, in government

<sup>1</sup> Read at the November, 1933, meeting of the Oriental Club of Philadelphia.

<sup>2</sup> Referring to the once plentiful but now extinct passenger pigeon (*Ectopistes migratorius*). Berens was the surname of a Hudson's Bay Co. official for whom the river was re-named a century ago.

records and in historical and ethnographic literature, these natives among others, have long received the generic designation *Saulteaux*, on the assumption that their ancestors were northwestern migrants from an old Ojibwa focal center near Sault Ste. Marie. The Pigeon River people were brought into treaty relations by the Canadian government, along with other Indians on the eastern periphery of Lake Winnipeg, in 1876 and to-day they constitute three distinct bands from the administrative point of view. The band farthest up the river, whose reserve is located on Lake Pekangikum, Ontario, at a distance of some 260 miles from the mouth of the river, is known as the Pekangikum band; while approximately midway between the latter and the band at the mouth, known as the Berens River band, is located the Grand Rapids group. Although the Hudson's Bay Co. has had posts on the river for more than a century there were no Christian missionaries among these Indians until 1873. The mission established at this date was at the mouth of the river and while to-day all the Indians of the Berens River band are members of either the Catholic or Protestant church, Christianization has spread more slowly inland. Two of the three settlements of the Pekangikum band are entirely pagan and the remaining one has only had a native missionary in residence a few years. The Grand Rapids Indians are nominally Christian but the fact remains that here certain aboriginal ceremonies and practices are still actively carried on, which parallel those in the forthrightly pagan groups. I have visited all of the settlements on the river and collected information in regard to the topics discussed from the leaders of the pagans as well as from other individuals of the older generation who to-day consider themselves Christian.

## II

According to *Saulteaux* belief the earth is flat. It is also an island, the present form of which is accounted for by reference to a myth in which *wisakedjak* survives a flood, and through the help of the muskrat who dives for earth, secures a sufficient quantity of it which, magically expanded, provides the familiar theatre of subsequent human activities. The wider reaches of *Saulteaux* cosmographical conceptions embody the notion of a vertical stratification of "worlds," in which the one known phenomenally is more or less central in position. The daily course of sun and moon is conceived in terms of an orbit around the earth. It is daylight in the world directly beneath this one when it is night in ours and vice versa.

The *Saulteaux* world proper is also roughly stratified in terms of a hierarchy of powers, which parallel terrestrial, meteorological and celestial

phenomena in an ascending series. The Winds and Thunder, e.g., are of a higher order of power and importance than most, if not all, terrestrial phenomena and *kadabéndjiget* or *k'tci'mā'ni-tu*, the "owner" of the world, is both the most remote (highest?) and powerful of all beings. The Saulteaux universe<sup>3</sup> is also quartered through the identification of the cardinal points with the Winds. The latter, according to a myth which recounts their birth and characteristic relations to man, are under the control of four brothers.

With this brief sketch of Saulteaux cosmogony and cosmography in mind we may turn to their interpretation of the nature of the universe. Here we find that two fundamental notions are entertained. 1) Everything in the universe is animate. Each phenomenal entity has an animating principle, a soul (*òtcatcákwin*) and a body (*mi'yó*). Man has a ghost (*djì-bai*), as well. This animistic conception is the fundamental dogma in their religious philosophy. 2) To this conception, however, must be added a more specific and characteristic notion. For all the various natural entities or classes of entities, as well as certain kinds of human institutions, there exist corresponding spiritual "bosses" or "owners." In regard to animals and plants, e.g., these "owners" (*kadābeni'mikuwat*)<sup>4</sup> are the controllers of the individuals of different species, or what corresponds to this natural grouping, in native terminology. The bears have an "owner," as do the caribou, beavers, otters, etc. Certain giant animals like the great snake, the great beaver, etc., which are thought to inhabit the Saulteaux country even to-day, although seldom seen, are likewise under the control of the same spiritual entities as their smaller congeners. The "owners" of these natural species are never seen with the naked eye. In regard to the "owners" of other classes of natural phenomena, the four brothers who rule the winds may be cited; the Thunder bird (*pinési-*), who controls Thunder and Lightning; the Great Hare (*misábos*), who is the "boss" of seismic phenomena, etc.

With respect to human institutions, it should be noted that those which are believed to have spiritual "owners" are those which require professional leadership for their maintenance and more particularly offer specialized forms of service or information which the layman desires to obtain from time to time (as, e.g., medicinal information, curative treatment, sorcery and magic, clairvoyance, etc.). Some of the spiritual owners of institutions are entities associated with these particular institutions alone: *midemā'ni tu*

<sup>3</sup> Here used synonymously with world.

<sup>4</sup> A generic term applicable to the "owner" of any animal or plant species.

with the medicine lodge (*midéwi-win*), *wábano ma'ni-tu* with the wabano dance (*wabanówi-win*), *kadabéndan̄g* with conjuring (*djisáki-win* or *kosá bāndamowin*), while others, such as the "owner" of the "skill" by which disease is removed by sucking (*ni'bákí-win*) is identified with the "owner" of the bears, as is *pinési*, the "owner" of the *potáte* dance, with Thunder and Lightning.

On the same conceptual level with these "bosses" or "owners" of natural phenomena and human institutions there also exist entities to which there are no phenomenal correspondents of the kinds described. Of these entities, the human characters in mythology may be cited as typical. Their very individuation and anthropomorphization in familiar narratives gives them a pseudo-reality which offers a convenient psychological foundation for their projection into the cosmos as contemporary living entities. But the most important independent entity of the entire cosmic scheme, totally divorced from any phenomenal manifestation whatsoever, is *kadabéndji'get* (or *k'tci-ma'ni-tu*), the Lord of the Universe, whose power and importance is in inverse ratio to any genuine trace of anthropomorphization.

### III

We are now ready to inquire what is the relation of the system of beliefs just outlined to the everyday life and habits of the Pigeon River Indians. The authority of tradition, elaborated most specifically in the *mythos* is, of course, the source from which native belief receives its primary sustenance. But it is a mistaken view, I believe, to assume that any body of religious beliefs is transmitted mechanically from generation to generation with nothing save dogmatic assertion and mythology to support it. Even "primitive" man can hardly be saddled with so naïve a faith. It is almost tantamount to the implication that religious beliefs are not taken with sufficient seriousness to make them a subject of reflective thinking and discussion. On the contrary, it may be assumed that any system of beliefs, insofar as it involves an interpretation of the phenomenal world, is recurrently and, in fact, inevitably, subject to challenge on empirical grounds. Granting for the moment that this is the case, how do beliefs react in the crucible of experience? In the case of the Pigeon River Indians the men, e.g., are expert hunters. Their knowledge of the habits of animals would excite the envy of any naturalist. Their knowledge of the topography of their country is extremely accurate, and they are constantly observing meteorological conditions. A white man unfamiliar with the country might be subject to illusions regarding the identity of some strange object but dimly perceived

in the bush, or he might be inclined to misidentify the source of some unfamiliar sound. But the native has spent his life in these surroundings. He has run the gamut of sights and sounds. Moreover, a man subject to delusions and hallucinations would make a poor hunter. His living actually depends upon accurate identifications. Consequently we must reckon with the fact that, although the weight of tradition always conditions the mind of the individual in favor of native belief yet, the daily round of life, the first hand knowledge of celestial, meteorological, physiographic and biotic phenomena, cannot be dismissed as an unimportant factor in the total situation. Experience and belief must be harmonized if beliefs are to be believed. The Indian is no fool. He employs the same common sense reasoning processes as ourselves, so that if he firmly holds to certain beliefs, we may be sure that they are supported in some degree by an empirical foundation. Thus experience is obviously the crux of religious rationalization. But dogma furnishes the leverage which makes the reconciliation of experience with belief possible. This, indeed, is its sociological function, else a system of beliefs would constantly be subject to disintegration. Since the fundamental assumptions of any religious system are those usually least transparent to its adherents, they are able to retain a relative stability even when the more superficial beliefs of the superstructure are modified. It is in the toils of these implicit underlying tenets that the individual mind is caught. It cannot escape them through the ordinary processes of reasoning because it is uncritical of the assumptions they involve. And unconsciously, much of the experience itself is interpreted in terms of them. Thus it comes about that although experience is consciously recognized by the Indians as a means of verification of beliefs, experience itself is unconsciously interpreted in terms of traditional dogma so that in the end, specific beliefs receive a satisfying empirical support and dogma and experience are reconciled.

What are the types of experience to which the Saulteaux appeal and how is knowledge derived from these sources interpreted in a manner which supports belief? For the purposes of our discussion three categories of experience have been selected.

1. Direct experience of natural phenomena, including (a) phenomena of the external (public) world as ordinarily perceived by normal individuals and (b) experience of extraordinary or unusual phenomena classified by the Saulteaux with (a) but which depend upon the testimony of a few individuals recounted to other persons.

2. Dreams. Although not usually related to other persons, certain portions of dream experience may be revealed under certain circumstances.

3. Observation of conjuring performances. This is a type of experience publicly shared by a number of persons.

These three categories are all of major importance when viewed from the standpoint of Saulteaux religious philosophy. The same categories would not, of course, receive a similar evaluation from the standpoint of some other system of beliefs, despite the fact that the first two of them are ubiquitous in human experience and the third, which in a more generalized form, would include supernormal and psychic phenomena of all kinds, approaches the universal in one form or another. But whereas in Saulteaux culture, e.g., dreams are of central importance in securing direct knowledge of spiritual entities of various classes, in other cultures dreams are subordinated, if recognized at all, as the source of religious knowledge.

1. *Direct experience of natural phenomena.*

a) The belief that the earth is flat is supported by daily observation and experience. No Indian, in fact, can be convinced that the earth is round. Indeed, I should say that in our culture the prevailing belief that the earth is spherical is a scientific dogma which, so far as the common man is concerned, rests almost entirely upon authority. It by no means receives support in ordinary experience. The Indians are honest, even if naïve, empiricists.

The journey of the sun across the heavens is again a matter of direct observation and the inference that it must pass under the earth to reach the east is reasonable, as well as harmonious with the stratified conception of "worlds." In this case the nature of the scientific proof that the earth moves around the sun is even more remote from ordinary experience than the data which indicate that the earth is round.

The Indian idea that the earth is an island, on the other hand, rests on dogma alone. But contacts with the whites have convinced them of the truth of it when they are told that the western hemisphere, in which they live, is surrounded by water.

The belief that Thunder and Lightning are the manifestations of a huge hawk-like bird (pinési) may at first sight seem a preposterous idea, without the slightest empirical evidence in its favor. But consider the following facts. In April, when pinési first appears, it inevitably comes from the south. This is likewise the month when the birds begin to arrive from the same direction. In the fall, thunderstorms move towards the south at the same time that the birds begin to disappear in this direction, following the Milky Way which stretches across the heavens almost north and south and called the "summer birds' trail." And these birds, like pinési, have

disappeared by the end of October, are absent all winter and only reappear the following spring.<sup>5</sup>

Here we have a perfectly rational inference made from the common observation of concomitant phenomena—summer birds and thunderstorms. They are not independent variables. They always occur together. Therefore, they are somehow related. Science develops hypotheses on the same rational basis but attempts to check observation by experiment. The question is raised whether concomitant phenomena are truly connected or whether A can, under certain conditions, occur without B and vice versa. But such a critical analysis of observed phenomena is not only a recent but a unique feature of European scientific tradition. The Pigeon River Indians infer that the relationship between birds and thunder, as observed in seasonal behavior, indicates that the animating agency of the latter must also be bird-like in nature. Their fundamental animistic assumption with respect to natural phenomena in general strengthens this analogy.

b) But the evidence that Thunder is a bird does not rest here. In addition to the authority of tradition, backed by the observation already referred to, there is the corroborative authority of personal testimony to be considered. There is a man now living who, when a boy of twelve years or so, saw *pinési'* with his own eyes. During a severe thunder storm he ran out of his tent and there on the rocks lay a strange bird. He ran back to get his parents but when they arrived the bird had disappeared. He was sure that it was *pinési'* but his elders were skeptical because it is an almost unheard of thing to see *pinési'* in such a fashion. It was not until later when testimony from another source was invoked that the boy's story was believed.

Unusual experiences of this sort also provide evidence for the existence of the giant animals, the great snake, the great beaver, the great lynx, etc.; beasts which were more plentiful in the past but which still persist in small numbers to-day. The particular spot where one of these animals was seen is often commemorated in topographical nomenclature, as e.g. *wábamik-*

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<sup>5</sup> The consultation of a bird calendar compiled from the records of the Ornithological Secretary of the Natural History Society of Manitoba, showing the usual times of occurrence of 69 species in the vicinity of Winnipeg, indicates that the species wintering in the south begin to appear at this latitude in April and disappear for the most part not later than October. Comparison with meteorological observations, also taken in Winnipeg (Canada Year Book, 1927-28, p. 59) shows that the average number of days with thunder per month begin with one in April, increases almost arithmetically to a total of five in mid-summer (July) and then declines to one in October. Although these data are based on observations almost 200 miles south of the Berens river it is a striking objective corroboration of the correlation noticed by the Pigeon River Indians and I have no doubt that it would hold if similarly unbiased data were compiled at some point in their habitat.



obaùtik, White Beaver rapids, mi'cí'pi jiu baùtik, Great Lynx rapids. And in folk-lore we have episodes, or even whole stories, which account for the disappearance of these giant creatures from the earth. Interestingly enough, it is not only the lone hunter who sometimes catches sight of these great beasts even to-day. Several individuals in the same party may see them. My interpreter, e.g., and his two sons once saw the Great Snake. Multiple testimony of this sort is hard to contradict.

As among all unlettered peoples, first hand testimony in regard to observed "fact" ranks extremely high among these Indians; just as a generation or so ago many reputable captains helped to support the belief in the existence of great sea serpents by their personal testimony. Oral testimony among the Saulteaux, in fact, parallels the exaggerated emphasis upon the authority of the written word among us as represented, e.g., in newspaper reports, "true story" magazines, etc. Unless a man, by general reputation, belongs to the tall-story club, it is difficult to call him a liar. And the fact that so few persons in all have seen these great animals, gives the accounts of those who have far greater influence. Furthermore, a man who described a creature of his *own* imagination would be subject to ridicule. Only the animals which are known in tradition and mythology are seen. There can be discerned, in consequence, an extremely close correlation between personal experience and traditional beliefs.

As an extreme example of this kind of experience which, although judged to be extraordinary, is nevertheless accepted as fact, is the adventure of a boy who was befriended by the Great Trout.

This young man paddled eight or nine miles out to an island in God's lake to collect some birds eggs. While he was gathering the eggs his canoe got loose and drifted away. He remained on the island several days with very little food. As he was sitting on the shore one day he heard someone say, "Nózis (Grandson), come down here." The voice came from the water. So he went down to the water and there he saw the Great Trout. "Get in under my fin," the Fish said. So the boy did this. It was as comfortable there as if he were in a wigwam.

The story goes on to tell about the great distances which the boy travelled with the fish, how the Trout obtained any kind of fish the boy wished to eat and finally, how the Great Trout took him back to the island where later the boy's father found him.

From an objective point of view this story is indistinguishable in spirit and content from dream experiences or mythology. There is in fact a well known myth in which the hero, Tcākábec, is swallowed by a great fish. Nevertheless the Indians classify it as *tābā'tcāmoin*, which carries the

meaning of news or tidings, as contrasted with ätsokán, the traditional formalized narratives of mythology. It is a "true" story then, and not myth. And it demonstrates the extremely close relationship which exists between reputed personal experience and the *mythos*. It likewise emphasizes the unitary character of the empirical universe as it must appear to the natives themselves.

Lest we credit the Indian with excessive naïveté I cannot resist drawing the parallel here to the literal belief in Jonah's experience, dear to the hearts of many Christian believers. And still closer to the contemporary period there are the experiences of Swedenborg, who it will be recalled, attended the Last Judgment in the year 1757 and remarked, "to all this I can testify, because I saw it with my own eyes *in a state of full wakefulness*" (italics our own).

The subtle interrelations of belief and personal experience are not confined, of course, to this pseudo-mythological level. The following experience of an encounter with a bear, related to me by wigwaswátik, chief of the Pekangikum band, shows how the notion that bears understand human speech received empirical support.

One spring when I was out hunting I went up a little creek where I knew suckers were spawning. Before I came to the rapids I saw fresh bear tracks. I walked along the edge of the creek and when I reached the rapids I saw a bear coming towards me, along the same trail I was following. I stepped behind a tree and when the animal was about thirty yards from me I fired. I missed and before I could reload the bear made straight for me. He seemed mad, so I never moved. I just waited there by the tree. As soon as he came close to me and rose up on his hind feet, I put the butt end of my gun against his heart and held him there. I remembered what my father used to tell me when I was a boy. He said that a bear always understands what you tell him. The bear began to bite the stock of the gun. He even put his paws upon it something like a man would do if he were going to shoot. Still holding him off as well as I could I said to the bear, "If you want to live, go away," and he let go the gun and walked off. I didn't bother the bear anymore.

This anecdote illustrates how the generalized belief that bears understand what is said to them, emphasized in childhood by the narrator's father, influenced his behavior in a specific situation. It is a striking illustration because the narrator expressly refers to the influence of the belief upon his behavior. In other cases it would be more difficult to trace the precise influences at work. The repeated narration of personal experiences of this nature, and hunting experiences of all kinds are favorite subjects of conversation, indicates the matrix in which beliefs are disseminated and kept flourishing from generation to generation. And on what grounds, in

view of such personal testimony can such a belief as the one cited be denied? The bear undoubtedly acted *as if* he understood what the hunter said and the inference that the spoken words were the efficient cause of his behavior was a rational interpretation. A sequence of events, that is to say, was judged to be a cause-effect relationship.

2. *Dreams*. It is now time to return again for a moment to the Thunder Bird. As I pointed out, the Indians were skeptical of the personal testimony of the boy who claimed to have *seen* pinési'. But the matter was clinched when a man who had *dreamed* of pinési' verified the boy's description. This leads us to the second category of Saukteaux experience, one that is of paramount importance to them and characteristic of their religious culture. These Indians believe that they obtain direct personal knowledge of the spiritual entities of the cosmos, e.g., the "bosses" or "owners" of the phenomenal world, as well as other beings, through dreams.<sup>6</sup> Consequently dreams cannot be overemphasized as an empirical source of evidence in respect to the real existence of the genii of the cosmos, which on account of the importance of this avenue of knowledge are generically referred to as pawáganak, i.e., dream visitors.<sup>7</sup> Moreover, it is a dogma that most of these pawáganak are *only* seen in dreams (although, as we shall see later, they may be *heard* under certain special conditions). This is why the testimony of the man who *dreamed* of pinési' was needed to verify the account of the boy who had *seen* pinési', instead of the other way about.

Dreaming is institutionalized in the puberty fast for boys, at which time the pawáganak (i.e., dream visitors who function as guardian spirits or protectors) are obtained which serve an individual throughout the rest of his life. A man would be practically helpless without them, particularly if he aspires to leadership in certain ceremonies, conjuring, curing or to special prowess in hunting. But all men do not dream of all pawáganak, nor is it customary for a man to speak of his protectors to others or to narrate his dreams. If he does, his pawáganak may desert him. Thus while the acquisition of guardian spirits is democratic, there is, at the same time, an esoteric aspect to dream knowledge. Consequently it is next to impossible to obtain satisfactory data in regard to the details of dream experiences, or an adequate sampling of such experiences from a large series of individuals. But such data as I have obtained, although chiefly from one individual, is strikingly similar in character to myth. The following dream experience from another source, is also myth-like. In general pattern it closely re-

<sup>6</sup> Not all dreams, it may be noted in passing. But for the purposes of our discussion it is unnecessary to go into the details of this question.

<sup>7</sup> More literally "that which is dreamed" (pawagan); *ak*=plural.

seembles the "true" story of the boy and the fish. Attention may also be called to the fact that in this case and, as I understand the matter, in general, the spiritual "bosses" of natural phenomena, such as animals, for instance do not by any means assume the form of their earthly underlings in dreams.

When I was a boy I went out to an island to fast. For several nights I dreamed of an *ógimā* (chief, superior person, gentlemen). Finally one night he said, "Nózis (Grandson), I think you are now ready to go with me." Then *ógimā* began dancing around me as I sat there on a rock and when I happened to glance down at my body I noticed that I had grown feathers. Soon I felt just like a bird, a *kini'u* (golden eagle). *Ógimā* had turned into a bird also and off he flew towards the south. I spread my wings and flew after him in the same direction. After a while we arrived a place where there were lots of tents and lots of people. We stayed there all winter. It was the home of the summer birds. I shot lots and lots of birds there, ducks, geese and many other kinds. In the spring when the birds started to fly north, *ógimā* came too and guided me to the island from which we had set out. "Your relatives must wonder where you are," he said. "Do not be afraid. Remain here a day or two and your father will come for you and take you to your home. Any time that you want me just mention my name and I will help you." The next day my father did come to the island. I knew that he was glad to see me again but he asked me no questions. I went home with him."

The *ógimā* of this dream, was, of course, the "boss" of the golden eagles, an extremely powerful *pawágan*. It is through dreams such as this that the individual becomes directly acquainted with the entities which he believes to be the active agencies of the universe about him. But he only sees them with the eyes of the "soul," not with the eyes of the body. To him, moreover, these spiritual entities of the cosmos represent a continuum with the ordinary world of sense perception. They are an integral part of reality and are not super-natural beings in any strict sense of the term. It is true that their powers are of a higher order than the entities they control, such as the plants and animals or man himself, for that matter. But this is just the reason man requires their help. If a man wishes to hunt caribou or trap beaver, his gun and traps are not sufficient as means to this end. He must be in favor with the "boss" caribou and the "boss" beaver. This does not mean that he must have them as spiritual protectors, although this is highly desirable. But negatively it means that he must not offend them and positively it requires that he treat the bones of the animals he shoots or traps, or the carcass, if it is a fur bearing animal the flesh of which is not eaten, in a respectful manner. If a man does have the bosses of the game or fur bearing animals as his *pawáganak*, they will, of course, constantly help him by sending their earthly congeners to his traps. Sometimes they will

also offer him specific guidance in dreams. The following dream was narrated to me by a Christian Indian. Nevertheless, it illustrates concretely the nature of this dream guidance and it also shows how a dream of this sort is tested objectively.

Once when I was out hunting I was discouraged. I had no luck at all. And I kept worrying all the time about my "debt." One night after I had finished making the rounds of my traps I lay down for a bit while my son was chopping wood. I fell fast asleep. I dreamed of a long trail running north. I was travelling on it. Then I saw a girl coming towards me. She was very pretty and dressed in white. She moved along as if she were skating, with very graceful motions. Then I saw another girl, closer to me, who was setting a table with lots of good things to eat. I started off towards the girls and first I came to the one who was setting the table. "This is all for you," she said. Then I woke up. Almost before I realized it I grabbed my hat and started off to visit a deadfall straight north of our camp.<sup>8</sup> It was about fifteen minutes walk and I began to think that it was rather foolish of me to go to this trap since I had set so many steel traps on my line. But I kept on and when I got there I found a fine fisher in the deadfall. It was a female. Then I knew what my dream meant.

The comment that the narrator made when he had finished this anecdote is significant. He said, "If I had been a pagan I would have made a feast then and there and smoked to the 'boss' fisher." At any rate this Indian got his fisher<sup>9</sup> and we have a dream-story which conforms to the old aboriginal pattern. And of course he actually believed that the "boss" fisher had sent him the animal, even though his Christian conscience inhibited the overt ceremonial behavior which he would not have ventured to omit had he been a pagan.

To the Indians then, the connection between hunting luck and the spiritual controllers of the game which they pursue is perfectly plain. Everyone possesses practically the same knowledge of animal habits, everyone uses essentially the same kind of traps, and the fur bearing animals are more or less evenly distributed throughout the country. Why then should one man make an extremely good catch and another hunter find his traps empty? The answer is clear. The successful hunter has received the help and guidance of the animal "owners," the unsuccessful hunter has not. Something has gone wrong. Perhaps he has weak *pawáganak*. Perhaps he has failed to honor the "boss" of some animal, as my friend failed to do. Or perhaps he

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<sup>8</sup> This dead fall was not in his regular trap line. He had made it near the camp in a spare moment.

<sup>9</sup> Worth \$85 at the time.

is just a poor hunter in a thoroughly objective sense. As I have previously pointed out the Indian is a practical man, regardless of what he may believe, so that he does not expect the animals to drop from the sky without effort on his part. But the differential in hunting luck, the departure from the mean, demands explanation. And the terms of this explanation are those of his basic beliefs.

Similarly, the Indian who becomes a conjurer, exercises mediumistic powers of clairvoyance and pre-cognition by virtue of the fact that in youth he has been "blessed" by certain kinds of pawáganak. These abilities are not interpreted as congenital traits of his personality, nor is it believed that they are learned in some conventional way, since there is no ostensible social mechanism for their transmission. These powers are mediated directly to the conjurer through dreams and are dependent upon the active help of his guardian spirits. In fact, if he abuses these powers his pawáganak may leave him and then his career as a professional conjurer is finished. Besides, men who have tried to develop similar manifestations without dreaming have failed to make good. Such cases, and there have been quite a few of them in recent years, obviously lend support to the dream origin of mediumistic powers.

Thus dreams are not only a direct means by which the individual can obtain knowledge of the unseen powers that surround him, but the overt behavior and the experiences of other persons, even if an account of their dreams as such is withheld, give further empirical support in behalf of the nature of dream revelation, as well as to the more fundamental dogmas regarding the cosmographical scheme.

3. *The Conjuring Tent*. Finally, there is a third source of experience open to everyone which, through auditory channels, brings man into direct contact with a large range of pawáganak. This is the institution of conjuring (kosa'bandamowin or dji'sákiwin). From the standpoint of the means employed to obtain the manifestations observed, this institution may be characterized as "mediumistic," to borrow a term standardized in modern psychical research. In the presence of the conjurer, who is concealed within a small structure built of poles driven deep into the ground and covered with birch bark or canvas, various pawáganak manifest themselves. The structure is violently shaken by the controllers of the winds, and in fact, to a greater or less degree, this agitation continues throughout a performance which may last hours on end. One of the exhibitions I witnessed, e.g., continued for three hours. Voices of different pawáganak issued from the tent, songs were sung by them, the "Boss" Turtle (miki·ná'k) carried on a humor-

ous repartee with members of the audience and *wemti'gózi*<sup>10</sup> offered a prize of "spirit" tobacco to the Indian who could repeat his song correctly. This "tobacco" is not the commercial variety and is considered to be extremely mysterious in origin as well as empirical proof of the transcendent reality of *wemti'gózi*.

From an objective standpoint we might characterize such a performance as the dramatic vocalization of the *pawáganak*. They sing songs peculiar to themselves and *miki'nak*. In the performance I saw, was characterized by a very distinctive vocal peculiarity. A conjuring performance is somewhat like visiting a "spiritual" zoo where one *hears* the "boss" animals—the moose, the caribou, the beaver, the porcupine, the sturgeon, etc., but does not see them. Mythological characters also manifest themselves. Theoretically, any of the spiritual entities of the cosmos, with one exception, may enter the conjuring tent. But, since no conjurer has precisely the same helpers, although there is a nuclear group present in all performances, there is variety in the manifestations observable in the presence of different men. The spiritual "owner" of the institution itself (*kadabéndangí*, who is euphemistically called "the one that takes them out" (*ozági'zi'í'we*), is always present, as are *miki'nak*, the Boss Snapping Turtle, and one or more of the winds.

From the native point of view such performances are not primarily "mediumistic" demonstrations or entertainment, although I think it cannot be denied that these ends are incidentally served. The "real" purpose of conjuring is to obtain information in regard to persons or events at a distance, to recover lost or stolen articles, and formerly, if not now, to detect the sources of witchcraft, usually on the part of a sorcerer in another settlement. Empirically then, belief in the reality of the *pawáganak* is not only based upon auditory perception, it depends upon the outcome of events. If the lost article is found, if the information regarding an absent person proves true, if pre-cognitions are subsequently verified, if the bewitched person recovers, there is no room for skepticism. In this way conjuring often offers startling evidence in support of fundamental beliefs.

In the performance witnessed three of the inquiries made were as follows:

1. I sought information in respect to the health of my father who was ill at the time I was informed, after *miki'nak* had been sent to Philadelphia, that my father was no worse. This was correct.
2. An Indian inquired about the condition of his brother who had been convicted

<sup>10</sup> A mythological character translated into English as "white man," although this is not the etymology of the word.

of a minor offense some months before and was in jail several hundred miles away. The information given was to the effect that this man would be seen very soon. We met him on his way up the river a few days later.

3. Another Indian, who had left the mouth of the river a few days before, just when his brother was stricken with pneumonia, wanted to know how his brother was. The answer was that the man was better and would recover. When we arrived at the mouth of the river a week later, he was walking about.

The conjuring institution must be recognized, therefore, as one of the most important empirical sources which sustain belief. Even though there are relatively few *bona fide* conjurers on the river to-day and Christianity is spreading even to the outright pagan groups, all the Indians retain a firm belief in the authenticity of this institution. And why not? In our culture fortune telling, and particularly spiritualism, supported in principle by the same sort of empirical evidence, are parallel phenomena which are anything but moribund.

There is one spiritual entity, however, which neither manifests itself in the conjuring tent, appears to man in dreams, nor has even been seen by the waking eyes of any human being. This is kadabéndji'get or k'tci-má'ní-tu, the supreme power in the universe. Perhaps the best English equivalent to the native term is Lord. Even from the standpoint of Saulteaux religious philosophy this spiritual entity is purely conceptual. Kadabéndji get is not specifically anthropomorphized in respect to bodily form or sex, nor is there any trace of iconographic representation. Yet by implication this power possesses the faculties of sentience, omnipotence and presumably omniscience. Kadabéndji get is the Creator and Ruler of all things, if I have fathomed the native mind sufficiently. In terms of the religious system itself, in short, he is the Boss of Bosses, the Owner of the Owners. And since the notion that everything has its boss is so fundamental to their beliefs, Kadabéndji'get is a logical necessity, if not logically prior in their whole scheme. Yet because the name of this supreme power is so seldom mentioned—I mean because of a positive tabu, which implies respect and veneration—the casual inquirer might mistakenly characterize this religious system as polytheistic. In my opinion this notion of a High God is indubitably aboriginal. And one intrinsic bit of evidence may be offered here. This is the modesty of knowledge which the Indians exhibit in respect to the positive characteristics of the Great Boss. If their concept was due to missionary influence I doubt whether this would be true. For Christians—and particularly missionaries—claim a much more intimate and positive knowledge of their Deity than any Pigeon River Indian. In this the natives remain more consistent empiricists. No one knows just



what Kadabéndji'get is like because no human being has ever had sensible experience of "him," even in dreams.

In conclusion we may say that, while from our point of view the body of religious tradition of these Pigeon River Indians is the primary conditioning factor in the beliefs of successive generations of individuals, and that in this sense their beliefs are but the impingement upon human minds of an arbitrary pattern, the result of historical circumstance, yet, in the experience of the believers themselves, the events of daily life and reflective thought offer recurrent proof of the objective truth of their beliefs. It is also apparent that the mental processes involved in this reconciliation of experience with belief are those of normal human reasoning, even though we may grant that this rationalization is naïvely applied. Yet even in this they are but following the mental procedure of common men. For how else may the truth of religion be demonstrated or belief upheld?

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PROBABLY no single fabric from the early periods of pre-historic Peru has been so justly admired as the celebrated piece belonging to Señor Raphael Larco-Herrera of Trujillo, Peru. Montell is authority for the statement that "at the great exhibition of ancient American art in Paris in 1928 this weaving aroused the greatest interest among all the objects new to science that were there exposed."<sup>1</sup> The cloth is sometimes referred as to "the Paracas textile" both with and without regard for the hundreds of other superb cloths which have come from that Necropolis. We are especially indebted to Mme Jean Levillier who has devoted the major part of her paper on pre-Incaic textiles to a description of the Larco-Herrera piece, and who has afforded us numerous splendid illustrations of its details. Mme Levillier has treated her subject with sympathy coupled with a sincere desire to supply meaning for the array of figures in the *passementerie* border of the cloth, but since her interests largely concern themselves with the historical, artistic, and interpretative aspects, she has condensed her observations relating to the technical features within four pages of text.<sup>2</sup>

The techniques employed in the construction of the Larco-Herrera textile, because they are so extraordinary, and at the same time so typical of the unusual feats accomplished by the weavers and needleworkers of the south-central and southern coast of ancient Peru, deserve intensive study only possible to the analyst having access to the cloth. But even without the opportunity to make direct observations on the specimen, which has been for some time in the Trocadéro in Paris, one has the many excellent reproductions in Mme Levillier's study to supplement analyses of similar pieces. The Larco-Herrera cloth consists of a central panel 51'' by 15½'' with a border on four sides which increases the measurements to 60'' by 25''. The dimensions and texture of the basic material suggest that the piece might have been woven for a small mantle or turban. The design in the central panel is a repetition of the conventionalized human figure. This appears in each of the thirty-two rectangles into which the panel is divided. Mme Levillier lists the five pattern colors on the ground of pale ochre: red, blue, plum, olive-green, and salmon pink. Of the arrangement of the five she writes:

There is a certain peculiarity in the repetition of design, which makes one of the characteristics of Peruvian textiles... and this is the strange rhythm which

<sup>1</sup> G. Montell, *Dress and Ornaments in Ancient Peru* (London), 1929, p. 166.

<sup>2</sup> J. Levillier, *Paracas, a Contribution to the Study of Pre-Incaic Textiles in Ancient Peru* (Paris), 1928, pp. 26-29.

governs the alternation of any one motive in a textile of dimension. The repetition and alternation follow no European order. In the present instance the zigzag motion of the colour sequence is not regular, and the result, instead of destroying rhythm, seems to add character and interest to it, for a secondary arrangement is achieved, where the heavy colours GREEN, PLUM, and BLUE alternate and repeat in the following beat, the lighter colours coming forcibly together.<sup>3</sup>

Then she gives the schematic diagram of the colors of the whole mantle, a scheme which I have broken up into smaller diagrams to show the appearances of the separate colors. The crosses represent the indicated color as it appears within the thirty-two pattern units.

BLUE	PINK	PLUM	ROSE	GREEN	YELLOW
×---	-×--	--×-	---×	-----	-----
--×-	-----	-----	-×--	---×	×---
-----	--×-	×---	-----	-×--	---×
-×--	×---	--×-	---×	-----	-----
---×	-----	-----	×---	--×	-×--
-----	--×	-×--	-----	×---	---×
-×--	×---	---×	--×	-----	-----
-----	---×	×---	-----	--×	-×--

This inequality of rhythm [Mme Levillier continues] is characteristic of the textiles from all regions, though the later fabrics from the North assimilate perhaps more closely to European tradition, the rhythm is never identical, and designers should bear in mind, that this peculiarity, adding charm and spontaneity, destroys a monotony which is the fatiguing feature of modern materials.<sup>4</sup>

It is, of course, possible that the weaver of this Paracas mantle consciously disregarded the usual formal arrangement or deliberately substituted an irregular rhythm for the convention. The most noticeable feature of the coloring of the embroidered motives on the Paracas mantles from the Necropolis is the rigid adherence to an arrangement of colors which emphasizes diagonal lines of the same hue. There are literally hundreds of examples to bear witness to the satisfaction which seems to have been taken in regularity, and there are enough unfinished pieces with tiny colored yarn "indicators" pulled through the areas to be embroidered in those specific colors to prove that the artist craftsman planned his embroidery before he began work. The patchworks with which I am familiar are equally formalized down to the tiniest details. Breaks in the rhythm may be looked upon as illustrative of expediences or carelessness. With these specimens in

<sup>3</sup> *Op. cit.*, 25.

<sup>4</sup> *Op. cit.*, 26.

mind, I should find it hard to agree with Mme Levillier's interpretation that the irregularity in the Larco-Herrera piece, pleasing though it may be, is to be considered "one of the characteristics of Peruvian textiles."

Of the weave of the central panel, Mme Levillier says, "into a plainly woven fabric the design has been introduced, not by darning as would appear at a casual glance, but by the far more delicate method of warp wrapping."<sup>5</sup> The term "darning" is, strictly speaking, permissible, because darning done with a needle is identical to plain weaving done on a loom, and the central panel is a plain weave material. Its type has been called "multi-colored patchwork," a fabric requiring skeleton wefts over which warps lock end-to-end, in addition to regular interlocking wefts of adjacent but differently colored design units. Several references to and illustrations of the Nazca multicolored patchworks in addition to a detailed study of a Supe example (U.C. San Nicolas, Supe. 44-7827)<sup>6</sup> have already appeared, so it does not seem necessary to go into the technical features of the weave.<sup>7</sup> The actual weaving process was a simple one, but the setting up of the warps demanded great patience and a high degree of skill in handling the fine two-ply yarns of which the majority of the specimens were constructed. The patchwork type of cloth is known from a number of coastal sites, but specimens are rare from any one of them as may be judged from the fact that only fourteen out of about seven hundred specimens analyzed for an earlier study were found to have been made in this technique.<sup>8</sup> Proportions of patchwork to other woven types in that fraction of the Paracas collections analyzed at the Museo Nacional in Lima are somewhat larger, as I shall point out in a subsequent study of Paracas garments.

However interesting the central panel of the Larco-Herrera textile may be, it is the border which has aroused the great enthusiasm among those who have seen the original. This elaborate passementerie consists of the most incredible conglomeration of personages, animals, serpents, birds, plants, and objects, sometimes grotesquely represented, at other times rendered with fidelity to the natural forms. Mme Levillier computes the

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<sup>5</sup> *Op. cit.*, 26.

<sup>6</sup> Specimens preceded by the letters U.C. are in the University of California Museum of Anthropology; those preceded by F.M. are in the Field Museum of Natural History; and those preceded by M.N. are in the Museo Nacional, Lima, Peru. An asterisk denotes that the exact provenience of the specimen is unknown, or that it is a surface find.

<sup>7</sup> L. M. O'Neale and A. L. Kroeber, *Textile Periods in Ancient Peru*, UC-PAAE 28: 39, 40, 41, 49-51; figs. 8, 9, 10, pls. 6a, 19, 1930. AA 35: 87-94, 1933

<sup>8</sup> UC-PAAE 28: Basic table: frequencies of processes by areas and periods, following plate 48.

original number of figures to have been ninety of which about a dozen are missing.<sup>9</sup> She writes of the technique that

the basic fabric of the upper part of the border is crochet covered by knitting in stocking stitch. There is no reverse side to this textile (a characteristic of the finer fabrics throughout Peru, and of those of this region in particular) but how this double-faced border was accomplished is a marvel and a mystery; for though the method employed can be deduced, the actual fashion of working will never be known.<sup>10</sup>

Unfortunately, the last part of the quotation must always be true. It is possible to achieve an identical result by reconstructing a technique in modern materials, except that our yarns are usually coarser, but it is impossible to determine whether or not the method followed by the analyst bears any relation to that of the ancient craftsman. The technique of the border on the Larco-Herrera textile is truly a marvellous expression of a craft, but it is not wholly a mysterious expression. What does tax the imagination is the method by which the collection of separately worked details, often diminutive, could have been assembled and securely fastened in their places to form the complex whole shown in the frontispiece of Mme Levillier's study. But this flamboyant example of expertly handled materials and of stitchery under perfect control is not such an engima when its simplest elements are analyzed. To cite an analogy from more familiar fields: needlepoint lace, the *punto in aria* of the great ruffs of Elizabethan costume is the highest and most complete expression of a very elementary technique which is known in embroidery as a buttonhole stitch, in plain sewing as a blanket stitch, in basketry as coil without foundation, and in knotting as a half-hitch. There is, however, this one marked difference between the Italian and the Paracas fabrications: the buttonhole stitch of the Italian lace went through so many variations and twists as to almost lose its identity, while one simple stitch endlessly repeated without variation served to accomplish the most complex of the Paracas configurations of which I have first-hand knowledge. This stitch has been referred to by several names among which is "needleknitting."<sup>11</sup>

As may be seen from the figures, which will be explained farther on in this paper, it is possible to form a vertical line of single stitches in needle-knitting technique, or a horizontal line composed of any number of stitches (fig. 1). These are the two fundamental forms in which the stitch is found in Peruvian textiles, but they bear a close relationship to the most complicated

<sup>9</sup> *Op. cit.*, 26

<sup>10</sup> *Op. cit.*, 27.

<sup>11</sup> UC-PAAE 28, 32, 50.



form as we know it, the three-dimensional knitting of the Larco-Herrera textile. The width of the embroidered line, whether one-loop, two-loop, three-loop, or an indefinite number of loops depends upon the function of the line. Even a tentative classification of examples of Peruvian needle-knitting suggests the range of forms for which the technique was used. The textiles cited are those upon which a preliminary report has already been made plus a representative group from the Paracas Necropolis. While the total involved approximates nine hundred pieces, the classification makes no pretense at completeness. Without doubt there are other variants and new types which would necessitate amplifying the list as offered in this paper. Then, too, the frequent occurrence of certain forms in different sites must be interpreted with the knowledge that the available number of specimens from those sites yielding needleknitting examples varies from eight to two hundred. However, there are some unmistakable evidences of local preferences, among them the patterned edge bindings on the cloths from Middle Ica II sites, and the tape-like seam coverings on the fringed garments from the Necropolis at Paracas.

Based upon my own analyses, the order of the frequency of forms constructed by the needleknitting technique is, in the main, as follows:

1. Edge bindings. All periods, especially Middle Ica II and Late Nazca.
2. Seam coverings. Early period, especially Paracas Necropolis.
3. Decorative garment details (*passementerie*). Early period, especially Nazca.
  - Tab finishes.
  - Fringes of the 3-dimensional types.
4. Garment accessories. Early period, especially Paracas Necropolis.
  - Llautos or head bands.
  - Decorative slides for plaited ties.
  - Tassel head coverings.
5. Fabrics.

*Needleknitted edge bindings.* Two purposes are served by edge bindings: they strengthen and decorate the neck and armseye openings or other single edges of a garment, and they hold together two edges, like the sides of a bag or a tunic, at the same time that they ornament the seam.<sup>12</sup> The number of stitches in such bindings varies from one to eight (fig. 2). The one and two-loop types of needle-knitting were made during all periods, but they seem not to have been commonly used during any of them, possibly because the narrow widths limited patterning. In addition to the narrow width, one-loop needleknitting leaves the long bars of the stitch plainly

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<sup>12</sup> UC-PAAE 28 pl. 30b

visible on both sides of the garment. Eight turban pieces from Paracas mummy bundle 421 (nos. 54, 63, 68, 69, 72, 78, 83, 125a) were embroidered on all sides with stitches one-eighth inch deep, rather widely spaced. Then the bars of the stitches became warps for the two, three, or four extra yarns which were woven under and over the bars. The effect is similar to that of a binding of plain weave wool fabric (fig. 3a). When one-loop needleknitting stitches are not spaced, and when they are made in yarns of several colors, the smooth band formed by the close-set long bars is a decorative feature. This is the finish used on the lower edge of some of the Inca tunics.<sup>13</sup> There is a single instance among my analyses of decorative stitchery superimposed upon the close-set long bars: the side edges of a Late Nazca bag were seamed together with one-loop needleknitting in a sequence of red, orange, brown, and yellow yarns after which diamond shapes were embroidered over the bars in plain darning stitches (F.M. Poroma, Nazca. 171361a).<sup>14</sup>

All types of garments and periods considered, the majority of the edge bindings in the needleknitting technique are from three to five loops wide (fig. 3b). Bindings of this width not only give a rounded appearance to edges, but they strengthen garment openings. Three-loop needleknitted bindings in solid colors finish the majority of the neck openings of the Paracas esclavinas (small rectangular shoulder capes). Bindings of the same width are also numerous on the lower edges of garments, especially those from the Middle Ica II sites, but the edges are rarely monochrome. Even the five-loop binding is a very narrow width within which to place a pattern since only half of the width shows from either side of the garment, but three motives are characteristic: cross stripes, blocks of solid colors, and small plant-like forms. To vary this limited range of motives the embroiderer combined her colors in sequences involving more or less simple repetitions of from three to five colors in equal or unequal amounts.

Most of the Middle Ica II garment edges are embroidered in yarns of three colors, but the effects are varied by the choices made from a series of colors including some form of every one, with most frequent occurrences of the reds, yellows, and browns. The following are characteristic sequences, usually maintained with no break in the order: yellow, green, red, green,

<sup>13</sup> *Idem*, pl. 33.

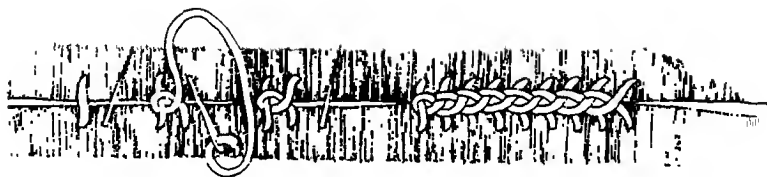
<sup>14</sup> Besides the cited examples from the Paracas Necropolis, specimens finished in one-loop needleknitting come from the following sites: Early Cañete (F.M. Cerro del Oro, Cañete. A16-169702); Epigonal Ica and Nazca (U.C. El-4463 and Cacatilla, Nazca \*8541b), Late Nazca (U.C. Poroma, Nazca \*8381, "Nazca" \*9110, \*9111 F.M. Huayuri, Nazca. 170385h, k; Huayrona, Nazca 7-170592b, Cantayo Nazca. Ca-3-170994, Poroma, Nazca 171361a, 171377).



repeat; red, purple, yellow, purple, repeat; red, brown, yellow, brown, repeat; red, yellow, brown, yellow, repeat; red, blue, orange, blue, repeat (U.C. Middle Ica II. M-4357, M-4360, M-4365, M-4372, M-4869b).



4



5a



5b

FIG. 4. Pattern within an eleven-loop needleknitted seam covering on a Paracas Necropolis mantle (M N. 364-12).

FIG. 5. Surface and reverse sides of a seam joining in needleknitting technique (F M. 171262).

If, instead of changing the color of the embroidery yarn at the end of a row or two of needleknitting stitches, the embroiderer continued her work for several rows with yarn of the same color, the stripe became a block.

Some block patterns were built up by the simple repetition of three colors in the order given for the stripes, but usually narrow monochrome or bi-chrome striped motives alternate with the blocks. Some of the edge bindings have one-fourth inch blocks of two colors separated by lines of a third: yellow, black, rose, black, repeat; red, brown, yellow, brown, repeat; red, brown, orange, brown, repeat (U.C. Epigonal Ica. E2, 3, 4, 4-4472;<sup>15</sup> Middle Ica II. M-4361, M-4367). A less obvious repetition is achieved by alternating two groups of colors, each group unit being repeated two or more times: 4×(rose, brown, yellow, brown) alternating with 4×(rose, brown, green, brown); 3×(rose, green, orange, green) alternating with 3×(rose, green, brown, green); 2×(red, blue, light blue, blue) alternating with 2×(red, blue, orange, blue). These examples are from Middle period sites (U.C. Middle Ica II. M-4362, Z4-4869d, Z5-4884).

More than three colors in an embroidered binding are unusual. One Late period specimen has a four-color sequence—black, cream, orange, rose repeat—more or less successfully maintained; a Middle period specimen has a five-color pattern consisting of three groups of three colors in blocks in the following order: red, blue, brown, blue — red, blue, yellow, blue — red, blue, pink, blue; and the longest sequence is one found in the border of a Middle period garment, six colors, in blocks (U.C. Late Ica I. \*4213; Middle Ica II. Z4-4866; M-4289a). In the edge bindings on two pieces from a Late Nazca site the design unit is divided approximately into thirds. The first third is solid red in both cases, the second unit consists of crosswise stripes of red and a second color, and the last third of the unit consists of crosswise stripes of red and a third color (F.M. Poroma, Nazca. 171361b, c).

A good example of the plant-like motive made within a binding is found on a child's tunic, a specimen from the Early period (F.M. Cantayo, Nazca. Cax-cache 171071d).<sup>16</sup> The neck and arm openings are finished in five-loop needleknitting. The main color is rose red, and each of the small forms is embroidered in some one of seven colors in a sequence maintained the full length of the binding. A reconstructed detail of the pattern is shown in figure 1c. There are several other small patterns which fall outside the stripes, blocks, and plant-like motives, but they occur infrequently (U.C. Epigonal Cahuachi, Nazca. \*8786;<sup>17</sup> Middle Ica II. M-4359c.<sup>18</sup>

<sup>15</sup> Needleknitted bindings on Epigonal Ica specimens are illustrated in UC-PAAE 28: pls. 15c, 17e, f, 18b.

<sup>16</sup> *Idem*, pl. 8b.

<sup>17</sup> *Idem*, pl. 15b

<sup>18</sup> By way of summary, the needleknitted binding three to right loops wide is known from the following Early sites: Paracas Necropolis, Nazca, Cañete; from Middle period sites: Epigonal Ica, Epigonal Nazca, Middle Ica II, and from Late sites: Nazca, Ica, Cañete, Chíncha.

*Needleknitted seam coverings.* Garments from Early sites, particularly those from the Paracas Necropolis, display a great fondness for fringes. For this reason the occurrence of needleknitted bindings on cloths from this site is practically limited to those garments with neck and arm openings. But if the Paracas pieces exhibit few bindings, there is more than ample compensation for this lack in the abundance of examples of fine needleknitted bands which are embroidered directly on the garments. The Paracas fringes were usually made on a separate setup of two or three warps through which stitches to join garment and fringe were taken. The join was almost invariably covered by a flat band of stitchery. This detail differentiates the Paracas textiles from the cloths from any other site so far studied by me. The edge binding, apparently, never became important to the makers of the Paracas garments, for even where there is no fringe the full width of the band, instead of half the width as in a binding, is visible on the surface side of the garment.

Usually the covering band is the same on the sides and ends of the Paracas garments, but an appreciable variation in widths within the same specimen is shown by one mantle (M.N. Paracas Necropolis. 392-4). The edges of the mantle are bordered by a three-loop band, but a nine-loop band covers the centre seam. An idea of the fineness of the stitchery may be gained from the fact that this nine-loop band measures three-eighths of an inch, or a gauge equivalent to twenty-four loops per inch. This count represents fine work, but numbers of other needleknitted bands have gauge counts equivalent to twenty loops per inch. Mme Levillier has the following to say about the Larco-Herrera cloth indicating that it is much finer than any needleknitting I have analyzed:

The scale is 40 stitches to the inch in width, and from 35 to 37 per inch in length. For comparison it is perhaps interesting to state that the average jumper worn today by both sexes has about 8 stitches to the length, and 6 to the width, knitted on No. 5 needles. Needles made of fish bones are known to have been used in Nazca, and those in wood or copper are still recovered from the graves, but the knitting found in this textile required something even finer, and, as no wires were made in pre-Incaic times, the thorn of the guaranga or the cactus was used as a substitute.<sup>19</sup>

Most of the Paracas needleknitted bands are three or four loops wide. A few scattered examples from among the mantles, shoulder capes, and skirts upon which the bands appear illustrate five-loop, seven-loop, and eight-loop widths. One-loop or two-loop lines of stitchery do not cover a seam successfully although there are rare examples. As may be seen from Figure 1

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<sup>19</sup> (1) *p. cit.*, 28.

needleknitting allowed a fair degree of freedom to the embroiderer. The bindings or seam coverings were limited in width only by considerations of use; they were plain or patterned according to inclination, and the contours were flat, slightly rounded, or in bolder relief depending upon whether the embroiderer found it necessary to carry along under her work yarns of several colors from one to another of their positions in the pattern. The more colors in the motives, and the more numerous the yarns under the needleknitting, the more rounded became the band. Almost half of the specimens of needleknitting in an analyzed group of Paracas mantles exhibit interesting and often complicated forms of designs and color combinations. One of the mantle seam coverings is represented schematically in Figure 4 (M.N. Paracas Necropolis. 364-12).

An unusual example of one-loop needleknitting which holds together the woven garment and its fringe is to be found on an Early mantle of three-color striped wool (F.M. Cahuachi, Nazca. Aj-13-171262).<sup>20</sup> The appearance of the stitchery is identical on surface and reverse sides, and the method of making is similar in most respects to that of the vertical line of single loops as may be seen from Figure 5. The different steps show that the work progresses in pairs of single stitches, the first one of which is made on the surface side of the fabric, and the second on the reverse side.

*Decorative garment details.* Both the edge bindings and the seam covering bands in the needleknitting technique were embroidered directly upon the basic materials, but several types of garment details were shapes or forms over which the needleknitting was a veneer. For these types specially constructed foundations were required. They and the methods by which they were made will be described in connection with the details for which they were devised. One of the details most easily understood, because veneered only on the surface side of the foundation fabric, is illustrated by an Early specimen which was probably intended to trim the neck opening of a tunic (F.M. Cantayo, Nazca. Cax-cache 171071b).<sup>21</sup> The plain weave cotton foundation band ( $14\frac{1}{2}$ " by  $1\frac{5}{8}$ "; 44 warps by 40 wefts per inch) was woven with a long kelim slit. On each side of this neck opening repetitions of a bird motive were embroidered in needleknitting stitches. The ground is red and the motives are in eight colors with a line of black loops bordering every detail. Several features of this piece provide clues to an understanding of other examples of needleknitting. For instance, the sixty-eight small patterned tabs, each approximately  $\frac{5}{8}$ " by  $\frac{1}{2}$ ", which edge the sides and ends, were also embroidered over foundations individually constructed. The

<sup>20</sup> UC-PAAE 28·pl. 5.

<sup>21</sup> UC-PAAE 28·fig. 7.

yarn for these is a black or very dark brown wool which has in the main completely disintegrated leaving only the embroidery veneer. Each tiny rectangular basic web was built up row upon row with buttonhole stitches the first row of which was worked through the previously completed embroidery stitches on the extreme edge of the main band. The red veneer in which appears the plant motives also covers only the surface side of the tab.

From veneering one surface of a woven foundation with embroidery it is but a step to veneering both surfaces. The available examples of complete veneering are unfortunately fragmentary. Three groups of small squarish heads (approximately  $1\frac{1}{2}$ " by  $\frac{1}{2}$ "') may have been part of a border decoration (F.M. Cahuachi, Nazca. 171115, 171180b, 171321). The faces are red with features and paint marks in yellow, green, and blue yarns outlined with black yarn (fig. 6). The rectangular noses are in bold relief, and remnants of "hair" are indicated by the long stitches across the forehead of one face. Each head is embroidered in fine needleknitting stitches (gauge 24 loops per inch) over a cotton foundation constructed by means of buttonhole stitches worked row upon row. The surface and reverse sides of each head are duplicates except for some deliberate interchange of colors.

The largest available specimen of a fabric veneered with needleknitting stitches on both sides is from a Middle period site (U.C. Nievería, Lima. 9350a). The foundation for this piece is a sheer pink cotton material. The needleknitting stitches are very fine, ranging from 24 to 26 loops and from 13 to 14 courses per inch. The design contains suggestions of the human figure and fish forms worked in red, browns, blues, and yellows.<sup>22</sup>

Early Nazca and Ica sites also furnish examples of bands with tabs veneered on both sides with needleknitting (U.C. Ica. F-4721; F.M. Cahuachi, Nazca. 170211b, Ag-171116). Each has a naturalistic design of bird and flower motives repeated within the band. From the same Nazca site comes a veneered band with tabs on one side, and a fringe on the other (F.M. Cahuachi, Nazca. Al 5-171309). The needleknitting is in bad condition, but probably the seven colors appearing in the fringe were also worked into the design.

The variation of the needleknitted band illustrated in Figure 7 is unlike any of the other specimens (F.M. Cahuachi, Nazca. Ag-171117). No trace of a foundation is visible although the fragile condition of the piece might explain that fact. The fringe is added by weaving from the lowest

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<sup>22</sup> A. H. Gayton, *The Uhle Collections from Nievería*, UC-PAAE 21: 323, fig. 9, 1927. Same series, 28 pl. 27e

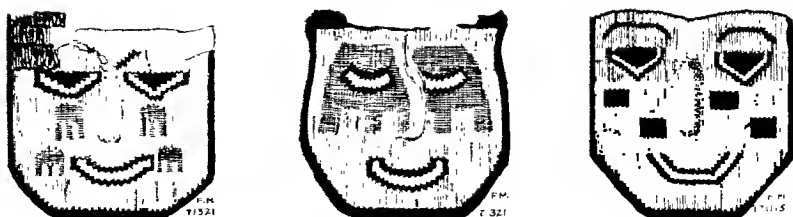
row of needleknitted loops over and under four warps, the fourth of which was set three-fourths inch distant from the first three and subsequently withdrawn. The directions in which the different portions of the work proceeded are clearly shown in the figure. The Paracas Necropolis also supplies examples of needleknitted tabs, but they do not seem to have been part of a trimming band, but to have been made over foundations which were worked into the edge of the garment itself (M.N. Paracas Necropolis. 421-141).

The remaining examples of this group of decorative garment details which are veneered by needleknitting includes those complex three-dimensional passementeries of which the border on the Larco-Herrera textile is the best known representative. But even within the three-dimensional group there are relatively simple forms such as the familiar bird and flower fringes from Early Nazca sites.<sup>23</sup> It may simplify the technical details to follow if the points concerning foundation materials which have been established by analyses are repeated: when the object to be surfaced with needleknitting stitches was in part a band, the foundation fabric was woven. But, when the objects to be veneered with stitchery were small, like the tabs and faces described above, or were similar to objects "in the round," then other devices—buttonhole stitchery, for one—were resorted to in order to provide fabrics or cores over which to work. This last conclusion is based upon examples available for analysis. Museum material of this character is too scanty to warrant the dissection of piece after piece in order to verify what has been found in one typical specimen, but I venture to say that most, if not all, of the tiny bird and flower motive borders on the early garments would prove to have been constructed over foundations similar to the several types found in a single Nazca border to a turban piece (F.M. Cahuachi, Nazca. Ag-171112).<sup>24</sup>

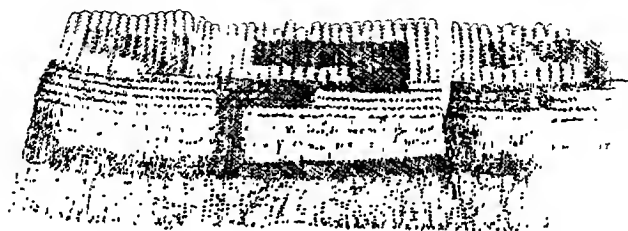
This turban border which I have chosen as representative is a mere fraction of its original length. The fragment consists of a row of birds arranged as if sitting on a branch (fig. 8). Like all examples of three-dimensional knitting, the piece is uniformly finished on all sides. Repeated at intervals within the length of the branch are motives in colors to represent, as I interpret them, the birds' bodies and their feet with the three toes. Angular, but nevertheless shaped, heads rise from the branch, and tails with three distinct "feathers" depend from it. The seaming stitches which fasten the passementerie to the garment are taken between the tail tips and the edge of the main fabric. The description might be applied, with rela-

<sup>23</sup> *Idem*, pl. 3.

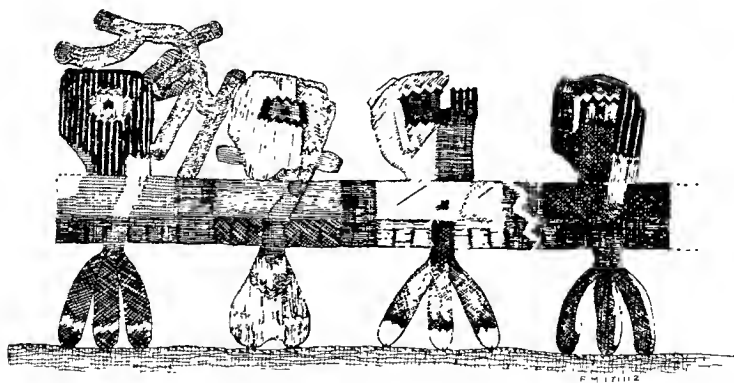
<sup>24</sup> *Idem*, pl. 3c.



6



7



8

FIG. 6. Decorative details in needleknitting technique (F.M. 171115, 171321).

FIG. 7. Fringed band of needleknitting (F.M. 171117).

FIG. 8. Three-dimensional bird fringe in needleknitting technique (F.M. 171112).

tively few changes, to many of the Early Nazca garment borders. Occasionally flowers are the only motives, or flowers alternate with the birds, or the birds are humming birds each with its bill inserted in a flower. The turban border under analysis which I shall refer to as the Nazca specimen, has lost a number of its details, but one sprawling plant form remains in position and the bird is eating the fruit. The needleknitting is in a variety of colors, five or six to a motive, and so evenly done that the outward appearance of the specimen gives no hint of the devices by which the embroiderer was enabled to create the semi-realistic effect.

From this point on it may be of interest and profit to compare the technical features of the Nazca specimen as they have been determined by analysis and similar features of the Larco-Herrera textile from Paracas. The interpretations of the latter must necessarily be based upon Mme Levilliers' descriptions, or inferred from the similarity between my analyses and the wealth of details illustrated in her study of the fabric.

To begin with, the foundation for the slightly rounded branch of the Nazca specimen is a woven cotton tape. The piece is too fragile to give certain results as to count, but other three-dimensional examples were made over cotton tapes from  $\frac{3}{8}$ " to  $\frac{1}{2}$ " wide, on a set-up of from 8 to 10 warps. Mme Levillier says of the Paracas textile that "the lower part of the border is composed of a very fine woven canvas-like fabric, the plain ribbon base requiring no shaping."<sup>25</sup> Some of the white plain-weave basic material shows along the upper edge of her illustration B-14. The author goes on to say that

this ground work was then covered by knitting—the threads, when not in use, pass at the back, and this is where the ground mesh serves a secondary purpose, for it permits these threads to remain hidden, or else to pass right through the interstices, so as to repeat the design on the opposite side. The great advantage of this technique, is that it makes the knitted cover adhere closely to the inner shape, so closely, indeed, that were it not for the threads, which in course of time have worn or rotted away, there would be little means of divining what technique has been employed to gain the finished effect.<sup>26</sup>

In addition to the similarity between the cloth foundations and the surface appearances of the specimens, there is a noticeable similarity between the methods of patterning the Nazca "branch" and the wider needle-knitted band which edges the Paracas piece: both are completely finished from every angle, and both have embroidered in great detail within their lengths the lower portions of every figure which stands free from the outer

<sup>25</sup> *Op. cit.*, 27.

<sup>26</sup> *Ibid.*, 27.



edge of the bands. Among other details which show clearly in Mme Levillier's illustrations of the Paracas textile is the definite break between the outer edge of the wide band and the free-standing figures which rise from it. There is the same break between the branch and the birds' heads in the Nazca specimen. Still another similarity between the two accounts for the break: the work has been held first in one position and then in another so that the needleknitting stitches proceed in several directions. The stitches in both the Nazca branch and the wide Paracas band were worked the short way of the piece, or crosswise. So also were the stitches in the Nazca birds' heads, and in the body areas of all of the free-standing figures of the Paracas border which show in Mme Levillier's illustrations. Since the Paracas figures are generally taller than they are wide, needleknitting loops embroidered the short way of the figures are at right angles to those of the band. Apparently the order of work rather than the ultimate effect was the feature governed by convention, because in the case of those figures which are broader than they are tall, the needleknitting loops were formed parallel to instead of at right angles to those in the band. There are three examples of this latter type shown in the illustrations: a loaded llama (B-25), a spotted feline (B-2), and a human figure bending forward from the waist so that the body is parallel to the edge of the band (B-10). In these cases the break between the figure and the wide band is practically invisible.

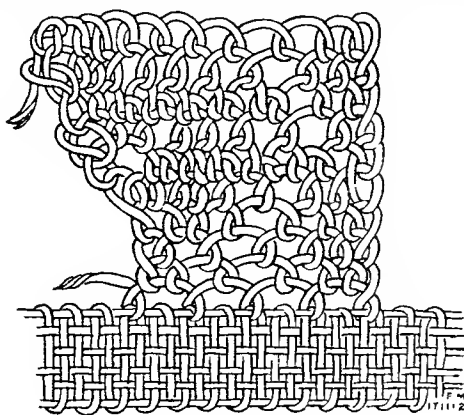
. . . A completely different technique (from that used in the band) [Mme Levillier writes] is used for the upper part of the border, where the great variety of shapes required for the figures, could only be achieved on so diminutive a scale, by some form of crochet, for which cabuya has apparently been used in order to give the essential stiffness. This ground work was then covered by knitting. . . <sup>27</sup>

Basic materials for such irregularly shaped units as stand free from the main bands could not have been woven, but they could have been worked with the needle, as dissection of the Nazca specimen shows. The foundation was made with buttonhole stitches, and Figure 9 is a drawing of a reconstruction made stitch by stitch to follow the microscopic analysis of one of the foundations for a bird's head. The drawing not only shows the manner of reversing the throw of the thread on the alternate rows, but more important, it shows how shaping was accomplished by the addition of stitches at certain points in the foundation. The first row of stitches in the basic fabric for the head is almost completely covered by the embroidery veneer on the branch, which fact may indicate that the needleknitted veneers on the head and tail elements were completed before that of the branch was

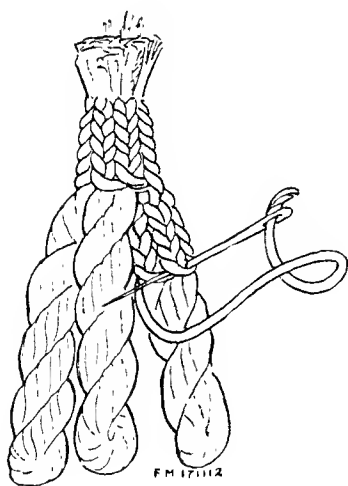
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<sup>27</sup> *Op cit.*, 27.

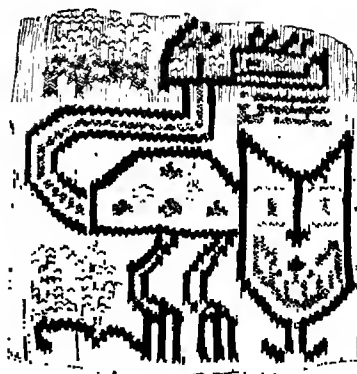
begun. Undoubtedly such a variety of figures as are gathered together into the border of the Larco-Herrera textile required an elaborate series of



9



10



11

FIG. 9 Reconstruction of buttonhole-stitch foundation for birds' heads. This was subsequently covered with needleknitting stitches (F.M. 171112)

FIG. 10 Reconstruction of tail feathers in Nazca three-dimensional needleknitting (F.M. 171112).

FIG. 11. Design motive in decorative detail on Paracas Necropolis garments.

foundations, but their construction was probably accomplished by much the same method as that used for the simple birds' heads in the Nazca piece. No crochet hooks have been found in Peruvian graves of the pre-historic periods up to date.

A second device by which the foundation material was furnished for three-dimensional motives is illustrated by the Nazca specimen. The "core" for the tail element is formed of three short lengths of cotton yarn (fig. 10). Each of these was given a super-twist, folded end to end to make a tightly twisted loop, and then this group was covered with several rows of needle-knitting. When the embroidery had proceeded about an eighth inch down from the ends of the grouped yarns, the three loops were spread apart so that each became a single tail feather. I believe this analysis would hold true for the feathers in the headdresses illustrated in Mme Levillier's plates facing pages 20 and 21, among others. It is likewise probable that the plant or flower motives which depend from the inner edge of the wide band of the Paracas border were made by some method similar to that used for the Nazca tail feathers. It is to the centre element of each of these plant motives that the Paracas patchwork panel is attached. The core for the single remaining plant motive in the Nazca specimen is invisible unless plies of light colored yarn which seem to be worked in with the red yarns making the tiny tips of the branches are to be interpreted as ends of padding or core yarns around which the needleknitting was done. It seems safe to assume that there is a core of some form within each detail of a needleknitted border fringe of the three-dimensional type.

The bird and flower fringes, as I know them, are separately made and subsequently seamed to the garment edges. Two exceptions to this custom are cited here because they may be stray examples of a much larger group than has appeared or has been analyzed up to the present. A cloth 43" by 21" has four-inch ties from each of its corners. The ends of these are bound in needleknitting from which birds' heads project at intervals—a combination of binding and three-dimensional needleknitting (F.M. Cahuachi, Nazca. Aj-10-171215). The whole piece is developed in approximately a dozen different hues. A second specimen, a mantle or veil, to which a fragment of a two-inch trimming band is still fastened, is a combination of weaving and three-dimensional needleknitting, but through the center there is a flat veneer of the knitting with birds' head rising from it. Tail feathers are represented by colored lines on the knitted band (F.M. Cahuachi, Nazca. Aj-10-171224).

*Garment accessories.* Under this classification come several objects: headbands, slides for plaited ties, tassel heads, and covered cords. The wide

tubular head band is the largest piece of wearing apparel I know which is occasionally made entirely by the needleknitting technique. The band (llauto, in Quechua) is found wound in the manner of a turban around the artificial head formed at the top of the mummy bundle. From this fact it is inferred that the band was similarly wound around the head in life. The llauto ends were finished with five small finger-like projections about two and one-half inches long and feathers. When arranged on the head the ends came to the front so that the projections stood up at the center. Usually the headband matches in design and coloring other pieces in a "set" of Paracas garments. Two headbands from the Paracas Necropolis measure  $123\frac{1}{2}$ " by 6" in circumference, and 161" by 5" in circumference (M.N. Paracas Necropolis. 421-9, 9a). There is no inner foundation fabric in either specimen, but the llauto may have been constructed over some object of clay or wood in order to insure a uniform width throughout its length. All the colored yarns which appeared in any of the motives were floated, or carried horizontally on the inside of the tubular band to the next design element in which they individually appeared. This method resulted in short floats, if a color was used often within the same course of stitches, and in long floats if a color was used but seldom. What this working with several tightly twisted wool yarns meant to the embroiderer can be better understood from the draft of a single row of needleknitting taken from a Paracas piece. The numbers in the tabulation below indicate colors, and the reader is to imagine that when the embroiderer completed the stitches beginning at the left with yarn of color no. 1, she began the stitches with a yarn of color no. 2. After the group in this second color, she picked up yarn no. 1 to use for two stitches; then she introduced a yarn of color no. 3, picked up the no. 1 yarn for two stitches, and so on:

111111111112222222222113333311221133333.

All the pieces of needleknitting with which I am familiar are built up row upon row with stitches in different colored yarns carried to their design positions after the manner given. Some idea of the vast number of stitches required for llautos of the Paracas type from mummy bundle 421 may be gained from the gauge: 20 loops and 20 courses per inch.

Not the least of the seeming difficulties in the fabrication of the headband by the needleknitting technique is the patterning. The shorter Paracas llauto has 34 motives developed in an orange-red-blue sequence on each side of the flattened tube. The longer llauto is worked with orange, dark yellow-green, and dark blue in a more or less regular sequence of combinations. There is one point of difference between the two needleknitted headbands and other types of objects constructed by this technique: there seems

to have been a deliberate avoidance of colors in duplicate positions on the two sides. For instance, specimen 421-9a has a color sequence following 1, 2, 3; 1, 2, 3, etc., from the end on one side, but the sequence changes to 2, 3, 1; 2, 3, 1, etc., on the other.

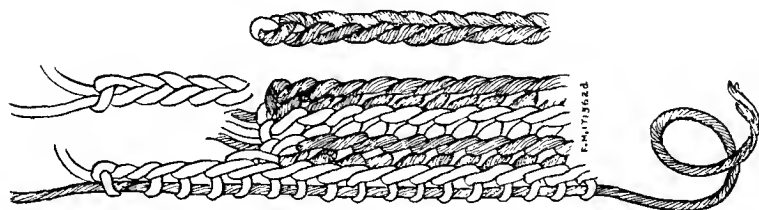
A tubular object about two and one-half inches square which is similar in appearance to a section of a head-band is occasionally found near the fringed ends of the two plaited ties which are sewn to the tops of the Paracas skirts. These decorative slides were made without foundations, in a very fine stitchery (gauge 26 loops per inch), and each was designed to match the embroidered motives on the skirt (fig. 11). The technique of making was the same as that described for the llautos (M.N. Paracas Necropolis. 91-30, 62; 382-71; 421-74a, 100, 111, 125).

The Paracas Necropolis garments not only showed a fondness for fringes, but also for tassels, often 20'' to 24'' in length. Instead of allowing the plaiting ends to fall free, separately made tassels were sometimes joined to the ends of the ties. Then, since the join was a bulky one, it was concealed by a shaped cover. A tassel head of average size measures 3'' deep, 4'' wide, and is about  $1\frac{1}{4}$ '' through from side to side (M.N. Paracas Necropolis. 421-48a). The entire cover was made in needleknitting technique of fine gauge, but without a fabric foundation, and its design is identical to that of the main garment (M.N. Paracas Necropolis. 157-63, 81; 421-48a, 62, 109, 110, 113, 116).

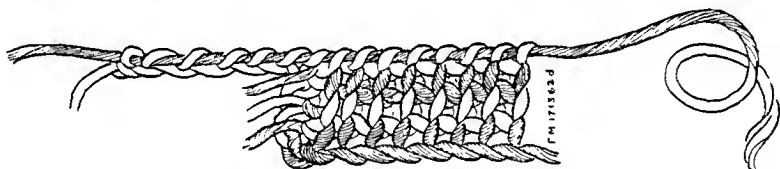
Cords veneered in needleknitting technique are rare. The method of making them is similar to that followed in constructing the birds' tail "feathers" on the Nazca three-dimensional fringes (fig. 10). A core is covered round by round with needleknitting stitches. The number required—three, four, five, or more stitches—depends upon the size of the core. The cord designs are simple, to judge by the few available examples: single courses of four or five colors in regular sequence, or single stitches of color no. 1, color 2, color 1, color 2, etc., an arrangement which results in lengthwise stripes. Material is not available to indicate the periods during which veneered cords were most frequent. The Early Period sites furnish two examples (F.M. Cahuachi, Nazca. Ea-171125; Cerro del Oro, Cañete. 169737), and a Late Period site furnishes two more (F.M. Cerro del Oro, Cañete. C-24-169770, 169771).

*Needleknitted fabrics.* This subdivision of objects made by the needleknitting technique is represented by a single example from a Late site (F. M. Poroma, Nazca. 171362d). However, it seems of value to make special mention of the piece if only to lend support to the statement made at the beginning of this paper, that with no deviation from the manner of working

the stitch, a variety of results were attained. The fragment, judging from its slightly circular form, is a portion of a collar. The beginning row of stitches is missing, but they must have been taken either into the edge of a fabric, or over a mounting cord. The first row in the reconstruction copied for Figure 12 was made exactly like the simple one-loop needleknitted edge binding. Thereafter, although the manner of working the stitch does not change, the needle is passed only under the right-hand half of the stitch loop instead of being passed under the whole loop.



12a



12b

FIG. 12. Reconstruction showing surface and reverse sides of a fabric built up wholly by needleknitting technique.

*The technique of needleknitting.* In reconstructing the needleknitting I find it convenient to work toward me when embroidering a binding, and from left to right when embroidering a flat band. Also, I use cross-stitches upon which to start the work, although the actual form of the stitch does not matter since it merely provides a first row. As a matter of fact, the needleknitting stitch is made in the manner in which a cross-stitch is made, but it loses its outward similarity when it is repeated in lines or rows. The following steps outline the making of the one-loop binding (fig. 1):

Step 1. One simple cross-stitch is worked in such a manner that at the completion of the stitch the needle may be passed through the cloth from right to left to come out just below the cross. This point varies with the effects desired.

Step 2. The needle is slipped under the cross-stitch—but not passed through the cloth—from right to left thereby forming one-half unit of the first needleknitting stitch.

Step 3. The needle is passed through the cloth from right to left as in step 1. This passage of the needle forms a slanting float of yarn through the fabric, and completes the second half-unit of the needleknitting stitch on the surface side.

The steps from here on repeat steps 2 and 3. The depth of the edge binding made by a series of one-loop needleknitting stitches depends upon the distance down from the edge at which the needle is inserted through the cloth. The depth is rarely over a quarter of an inch even on the heaviest textiles.

Bands of needleknitting represent an increase in the number of cross-stitches upon which to begin the work, and a corresponding increase in the number of loops. For example, the construction of a 3-loop band proceeds as follows (fig. 2b):

Step 1. Three cross-stitches are made from left to right. At this point the needle is passed by means of a long stitch on the under side of the cloth so as to bring it out into position at the extreme left and just below the row of cross-stitches.

Step 2. The needle is slipped—but not passed through the cloth—from right to left under each of the crosses in turn. This step completes three whole needleknitting stitches. The needle is again at the extreme right.

Step 3. The needle is again passed through the cloth from the right to the left to bring it into position at the extreme left and just below the preceding row of needleknitting stitches.

The successive steps are repetitions of steps 2 and 3. Patterns are made within the embroidery as shown in figure 1c.

I have found a variation in the method of working the Paracas seam coverings in only two instances. To keep the 9-loop band on one mantle flatly in place, the needle was not slipped under every stitch of the preceding row, but at alternate stitches it was passed through the fabric (M.N. Paracas Necropolis. 392-4). As a result the reverse side of the mantle, in addition to having the long float made by passing the needle from right to left to bring it into position for working a new row of stitches, has four tiny stitches for each row. By means of this device the needleknitted veneer is held firmly to the surface of the foundation fabric. The facing for a tunic neck opening previously described shows the use of a similar device and for the same purpose (F.M. Cantayo, Nazca. Cax-cache 171071b). In other than these two pieces, all the examples of needleknitting available for analysis show on their reverse sides only the horizontal floats of lengths varying with the purpose of the embroidery. The length of the float equals the width of

the band, if the embroidery covers a seam, or its length equals the thickness of the cloth if the needleknitting binds an edge.

Iklé's illustrations show that the method used in his reconstruction of Trocadéro specimen no. 4922 provides for a series of short under floats necessitated by the manner in which the needle is brought into its proper position for each loop across the width of the band.<sup>28</sup> Since the Paracas and Nazca examples of needleknitted edge bindings and seam coverings are constructed by a uniform method, it is of interest to note the variation from that described by Iklé for the Trocadéro examples, some of which are similar in appearance to Ica and Ancon pieces.

*Terminology.* The term needleknitting was coined to describe the appearance of an embroidery stitch made with a needle. In a preliminary paper the statement was made that "a variety of Middle and Late embroidery here called 'needleknitting' is merely an embroidery stitch used to finish edges."<sup>29</sup> Farther on in the same study occurs this explanation: "Needleknitting, an embroidery stitch, is identical to a knitted edge binding one loop wide. It could be done by the ordinary knitting process; the stitchery variant represents a short cut to a lighter effect. Occurring both Early and Late in the same sites with the common form, it must be looked upon as knitting, structurally."<sup>30</sup> In this earlier study I made distinctions involving not the stitch itself, but the forms in which it appeared, and the probable method by which they were constructed. On that basis, the one-loop form of the stitch was called needleknitting, and the other forms requiring a multiplication of needleknitting stitches were classified as knitted. As a matter of fact, it is possible to reconstruct the latter by means of "true" knitting with two needles. Knitting always progresses from right to left. At the end of a row, when the knitting thread hangs from the last loop on the left, the work must be turned so that that loop becomes the first one on the right. This is the procedure with all "true" knitting on two needles. Now, if the purpose were to affix a band of loops to the surface side of a fabric—like those of the Paracas seam coverings—regular knitting would progress from right to left, but at the extreme left, instead of reversing the piece side to side, the thread would have to be drawn through the fabric with a sewing needle to its original position at the right so that the work could always proceed from a right-hand side which remained constant. The surface side of knitting done according to this method may be made identical in appearance to the surface

<sup>28</sup> Fritz Iklé, *Ueber Altperuanische Stickereien des Trocadéro*, Paris, Mitteilung der ostschweizerische geogr.-kommerziell. Gesellsch. in St. Gallen, figs. 5, 6, 7, 1930.

<sup>29</sup> UC-PAAE 28. 32, fn. 25.

<sup>30</sup> *Idem*, 50, fn. 26.



side of embroidery done with a sewing needle only. But, although the "true" knitting process as outlined is a simple one, it required more motions than need be made, and it would not be a practical one to follow in many instances. I believe that the term needleknitting originally applied to the one-loop edge finish is flexible enough to cover the second group of examples classified as knitted, and also the third group listed under three-dimensional knitting, a sub-variety.<sup>31</sup>

I have stated in connection with the description of some finds from the Caverns of Paracas that

I know of no direct evidence, to date, upon which to determine positively whether the three-dimensional types of knitting were done by the Peruvians upon several needles after the modern European method, or after the manner of embroidery, with a single needle. It is possible to reconstruct the forms . . . with common sewing needles and lengths of colored yarns; wherever the color changes in a piece are frequent it is easier to effect them with a sewing technique than to manipulate a number of knitting needles. For this reason, it would seem plausible to advance a theory that the work identical in appearance to knitting was done by an embroidery technique, but there is no certainty, as yet.<sup>32</sup>

No one of the different names for the technique so far suggested seems completely satisfactory. "Needle-coiling" is the name invented by van Reesema, and introduced with the frank statement that "for lack of a better name for this technic I will call it 'needle-coiling.'"<sup>33</sup> In a passage covering several pages the author describes the technique and illustrates about a dozen varieties as they are done in different parts of the world. My own objection to the term needle-coiling lies in the fact that the word "coiling" has no significance in stitchery or other handwork requiring a needle, but suggests to those familiar with basketry techniques some one of Mason's ten sub-varieties of coiling, nine of which require a foundation.<sup>34</sup> The tenth, his coiled work without foundation, brings to mind netted bags of thong and string. As has already been said, the term used to describe the lace technique, the most refined expression of the coiling or half-hitching technique, when it is done with a needle is called a buttonhole stitch. Literally and technically speaking, both coiling and half-hitching

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<sup>31</sup> *Idem*, Tables 4, 5, and the Basic table following pl. 48, pls. 3, 5, 8a, 9, 10c, 11c, 15b, c, 17f, 18b, 23a, b, 33, 36, 42c, and descriptions of the plates.

<sup>32</sup> *Revista del Museo Nacional*, Lima, Peru, 1: 66, 1932.

<sup>33</sup> E. S. van Reesema, *Contribution to the Early History of Textile Techniques* (edited by E. Nierstrasz), *Verhandelingen der Koninklijke Akademie van Wetenschappen te Amsterdam. Afdeling Letterkunde Nieuwe Reeks*, Deel XXVI, no. 2. 61-67, figs. 86-105, 1926.

<sup>34</sup> O. T. Mason, *Aboriginal Indian Basketry*, USNM-R 1902: 190 *et seq.*, 1904

describe the Nazca and Paracas *passementerie* borders, and likewise needle-point lace, but neither term even faintly suggests a true concept of the minute scale of the work. A second objection to the term needle-coiling has to do with van Reesema's Figure 101, a detail from a New Guinea specimen which is identical to Peruvian needleknitting. This figure illustrates an aberrant form, unlike any of the other dozen examples, and especially unlike Figure 92 which bears the legend "needle-coiling." The feature which differentiates the New Guinea and Peruvian forms from characteristic coiled work without foundation as a whole is this: in the former, each unit of the stitch depends from a similar unit in the preceding row of work, while in the typical examples of needle-coiling, as presented by van Reesema, each unit depends from the lag between the units on the preceding row.

Iklé's short paper explains the technique of the stitch which he also calls needle-coiling as he has found it on the cloths in the Trocadéro. Besides line drawings and illustrations of reconstructions, the author has gathered together some of the various terms and descriptions by which other writers have referred to this stitch. He rightly regrets the inaccuracies of analyses and the consequent confusion of names applied to the technique. For the most part the similarity to chain stitching and knitting has led to the adoption of those terms in classifying the stitch. But however similar in appearance chaining and needleknitting are on the surface side of the fabric, there is not a vestige of identity between the reverse sides of the work. There is much more ground for the use of the term knitting. Pesel, who has published on the embroidery stitches found on the textiles in the Victoria and Albert Museum in London illustrates several forms of a stitch known from Portuguese work. The stitch is identical to needleknitting of the one-loop Peruvian variety, but the involved name of "close plaited or encroaching long-legged cross-stitch" puts its use out of the question.<sup>35</sup>

In conclusion, analysis of the needleknitting technique as found on Peruvian cloths makes possible certain generalizations. This type of embroidery is found on both cotton and wool garments, but on the available specimens it is invariably done with two-ply wool yarns, either monochrome or polychrome, drawing from a wide range of colors. Needleknitting was known throughout all the periods from which we have textile materials, although apparently only in the central and southern localities. Over a hundred specimens from Early Supe, Tiahuanacoid, and Late Chimú Moche sites are without a trace of needleknitting.<sup>36</sup>

<sup>35</sup> L. F. Pesel, *Portfolio No. 3, Stitches from Western Embroideries* (London), 1913, pl. 111.

<sup>36</sup> UC-PAAE 28: Basic table: Frequencies of processes by areas and periods, following pl. 48.

The forms which are developed in this type of embroidery are not many, to judge from the data, but they do seem to indicate fairly strong local preferences. Frequencies must be interpreted with consideration for the fact that the available material ranges from 8 to over 200 specimens from the different sites involved in the study. The best known examples of the technique are the bird and flower passementeries from Early Nazca sites. Strangely enough, they are not characteristic of Paracas embroideries, although the most spectacular example of this type of workmanship is the Larco-Herrera textile from the Necropolis. It is certain that a choice would have to be made between the straight-hanging fringe as we know it, and the bird and flower fringes typical of Nazca. For Paracas mantles, the first form was the conventional finish. If a deliberate choice of a plain fringe was made, it bespeaks a nice sense of aesthetic balance. To edge an elaborately embroidered mantle with a passementerie of three-dimensional character would be to pile on the embellishments.

Flat tape-like seam coverings are also peculiar to the fabrics from the Paracas Necropolis. So also are the covered tassel headings, decorative slides for plaited ties, and the very long head bands or llautos. The last two objects are constructed entirely by needleknitting. Examples of edge bindings in needleknitting are found in abundance on textiles from all sites with the greatest number of frequencies among those from the Middle Ica II and Late sites.

From the analyst's standpoint needleknitting is one of the types of embroidery which allows great freedom to the craftsman, a type which could be manipulated to take any form for which a foundation was provided from a simple band to a passementerie of amazing complexity. But throughout all the variations of form, the single stitch unit remains unvaried, a fact which makes all the more remarkable the Nazca fringes and the Larco-Herrera textile from the Paracas Necropolis.

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EARLY in July 1933, three boys, Arlo and James Nuttall of Huntington, Utah, and Elwin Bunnell of Provo, Utah, digging in the mud along the east shore of Utah lake discovered a skull cap that seems to be worthy of study. It comes from a locality in the lake that is normally covered by several feet of water, and was buried under nine inches of heavy lake bottom mud.

Owing to the drought which prevailed in Utah in the summer of 1933, an increased demand was made upon the lake water for irrigation purposes.

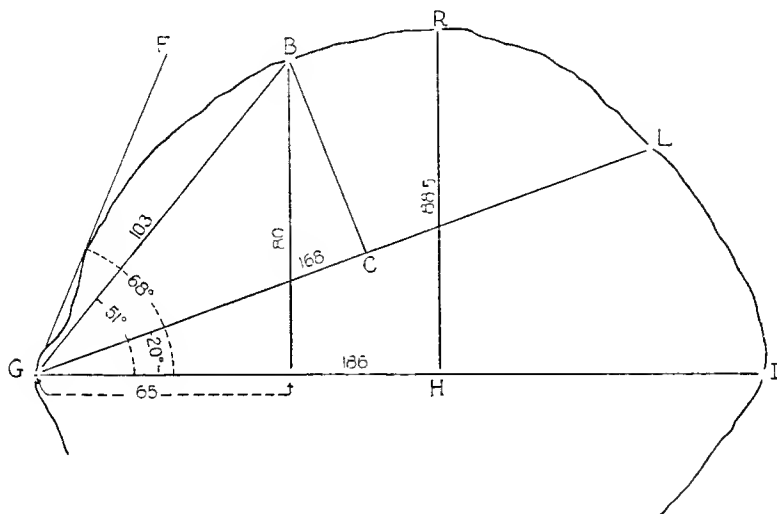


FIG. 1. A median craniogram tracing of the Utah lake skull with various measured, values expressed in millimeters.

As a result, the lake level was lower than ever before since man began using this water for irrigation. The lake was actually lowered, through pumping operations, approximately four feet below the natural outlet. This in turn exposed for the first time wide lake bottom areas, as the shore line gradients are extremely gentle. Hence the chance discovery of the skull cap.

Utah lake is a remnant fresh water lake of the greater ancient Lake Bonneville of Pleistocene age, which once covered a large part of western Utah. This lake and its environs furnished an ideal habitat for early man in the area, and they probably gathered around its shore in goodly numbers as attested by the many thousands of flint and stone implements which are found associated with burial mounds on abandoned lake levels.

The present skull has proved to be interesting in two ways. First, it comes from a point that would be far out in the normal lake and from underneath a mud layer that might have required an unusually long time to accumulate. The locality is also a mile north of the mouth of the Provo river, a moderate sized stream that empties into the lake, and so could not have been washed into position by stream flow. Second, the skull cap itself is entirely different from those found in the mounds along the lake shore. It is dolichocephalic in contrast to the typically brachycephalic ones of the mounds and of the local modern Indians. The brain case is reasonably thick with a somewhat unusual supraorbital development as the accompanying photographs and craniogram tracing indicate.

When compared with similar measurements made by Klaatsch, as recorded in "Pedigree of the Human Race" by H. H. Wilder (pp. 166-79), the following values seem most significant.

	<i>Glabella Inion</i>	<i>Calvarial Height</i>	<i>Calvarial Height Index</i>	<i>Bregma Height</i>	<i>Glabella Lambda</i>	<i>Frontal Angle</i>	<i>Bregma Angle</i>	<i>Glabella Inion Lambda Angle</i>
	<i>GI</i>	<i>HR</i>	<i>RH:GI</i>	<i>BX</i>	<i>GL</i>	<i>FGI</i>	<i>BGI</i>	<i>GIL</i>
	<i>cm.</i>	<i>cm.</i>	<i>cm.</i>	<i>cm.</i>	<i>cm.</i>			
Pithecanthropus	181	59.5	32.9	60.5	190	52°	41°	66°
Spy I	200	81	40.5	70	186	58°	46°	67°
Spy II	196	87	44.4	82.5	185	70°	57°	70°
Average Neandertal						63-73°	44-51°	
Utah lake skull	186	88.5	47.6	80	168	68°	51°	64°
Old Man of Cromagnon	202	101	50	92	193	83°	54°	70°
Native Australian			56.6				54-60°	

Additional measurements according to A. L. Kroeber, as listed on page 32 in his text "Anthropology" (1923) seem to place the Utah lake skull values in a similar relative position.

	<i>Calvarial Height Index</i>	<i>Bregma Angle</i>	<i>Bregma Position Index</i>	<i>Frontal Angle</i>
	<i>BX:GI</i>	<i>BGI</i>	<i>GX:GI</i>	<i>FGI</i>
Modern races	59	58	31	90
Cro-Magnon race	54	57	33	..
Brünn race	49	52	..	77



Comparisons of *Pithecanthropus erectus* (cast) (no. 1), Utah lake skull cap (no. 2), and modern Utah lake mound Indian skull (no. 3).



<i>Utah lake skull</i>	43	51	35	68
Neandertal man	42	48	35	66
Pithecanthropus	34	38	42	52
Anthropoid apes	26	30	45	

The above values seem to indicate that from the standpoint of purely physical measurements, the Utah lake skull approaches the upper range of Neandertal possibilities.

Subsequent excavations in the vicinity of the find as yet have failed to furnish additional fragments of the skull or skeleton.

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ON the night of November 5, 1923 I witnessed a Navaho Fire Dance at Steamboat Rock, Arizona, in the Navaho country. This was the ninth night of a Mountain Chant on which occurred the spectacular public exhibition known as the Fire or Corral Dance.<sup>1</sup> We arrived after the first dance, a fire dance, had been completed.

Within a pine and cedar twig enclosure were five hundred Indians sitting in a wide circle around a large dancing area surrounding a huge central fire. Each group of families also had a small fire of their own. The corral had its entrance on the east.

Two actors now entered through this opening. They were dressed in dance kilts and red moccasins. (In all other performances of the night the actors were barefoot.) One had a wide, loose strip of cloth over chest and back put on poncho-wise; strips of beaded cloth were also suspended over chest and back to the waist, these varying from slender cords to strips an inch or more in width, the center one having small mirrors sewed to it. Both actors wore conical caps, with imitation buffalo horns projecting forward at the base on each side. From the hat and horns feathers were suspended, and strips of bright cloth were tied around the elbows and at the knees. Each one also carried in each hand a much feathered arrow with a large stone head.

These two danced to the left around the central fire to the song of a group of musicians seated to the southwestward. At every third accented word in the chanted song they presented the arrows to the fire and then to the audience. After they had circled the fire six times, two sick persons, a man and woman, were brought from a nearby group and placed on a blanket southwest of the fire, which they faced. The two actors, already in position between them and the fire, now danced first facing each other, then facing east and west, then north and south, and finally east and west again.

They then made a peculiar hawk-like noise as each spat on his arrow and rubbed it between his lips. Then with another hawk screech, each threw his head back and swallowed his arrow, thrusting it, head and shaft, down his throat for eight inches. After dancing for a considerable time, uttering weird noises, they withdrew the arrows and applied them to the persons of the patients.

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<sup>1</sup> For parallel accounts of the Fire Dance see Washington Matthews: *The Mountain Chant: A Navajo Ceremony*, BAI-R 5: 379-467, 1887; Franciscan Fathers, *An Ethnologic Dictionary of the Navaho Language* (St. Michaels, Arizona), 1910, pp. 376, 419, *passim*—Editor



Performers of the Navaho Fire Dance



The actor on the north, facing westward, laid his arrow on the feet of the northerly patient, the arrow pointing to the north; then reversed it. He laid it in the same fashion on knees, abdomen, chest, shoulders, and head in turn. Then he pranced backward a few steps and waved his arrow skyward to each of the cardinal directions. The two arrows were again swallowed, after which both actors placed them as above, one on the woman, the other on the man. They then repeated the backward and forward dance facing each other. Waving their arrows at the fire, they passed out of the enclosure, passing north of the fire.

In a few minutes they returned accompanied by the file of fifty-nine Indians in citizen's clothing. These, who were chanters, danced around the central fire, at every sixth step waving at it a bunch of twigs held in one or both hands. After circling the fire twelve times they seated themselves in an east-west line to the southwest of the fire while the two arrow dancers resumed their dance as before.

As soon as these participants filed out, whistling, peculiar noises and singing without announced that the next set was ready. At a signal from within, fifty-five men filed in and around the fire, chanting, gesticulating, prancing, and turning this way and that. They waved gourd rattles and woven rattles (shaped like horse-radish graters) protruding from clasped bunches of twigs.

As in the earlier group, there were two special performers, dressed much like the first pair but barefoot and, in place of the arrows, carrying in each hand a double triangle mounted on a central stick and feathered at each angle. These they waved as the arrows were waved in the preceding dance.

After circling the fire six times, the main body of performers seated themselves, the two principal actors remaining standing some ten feet north of them. While the seated men chanted, this pair danced six steps forward with a light, gliding, pacing step, and seven in reverse order. Dancing six times first to the east, they repeated this to the south, north, south, and again to the east. They then advanced to the fire, with a wave presented the triangles to it, and departed by the north side of the fire. The sick persons were not brought forward for this performance.

This dance was followed immediately by another arrow dance in which eight special actors took part. Four of them faced the others, each wheeling about so as to dance toward the four corners of the earth. They then placed their arrows on the afflicted parts of the patients, and swallowed and withdrew them as the two arrow dancers had done earlier, after which they left the enclosure followed by the other actors.

As soon as they were outside, a procession filed in, headed by a masked

actor and accompanied by the triangle-bearers. These performers all threw vigor into their actions; the special dancing being very similar to the earlier performance of the triangle-bearers, except that the masker took a vigorous part. Thus they danced abreast, facing the east, south, west, and north, then east again; then prancing off into obscurity.

The next performance involved a rising sun and moon. In this the two special actors had large, shield-like feathered disks in front of their breasts. The disks were some eighteen inches in diameter, with eagle tail feathers extending from their margins like rays. On the face of each disk were painted in black eyes, mouth, and vertical lines for ears, to represent the features of sun and moon respectively. Further, in addition to the disks, each carried feathered triangles which they used in a fashion similar to that of the triangle-bearers described above.

Sun and moon dancers then alternated with masked performers several times; the former occasionally dancing face to face as the arrow-bearers had done. They were replaced by the triangle-bearers and maskers, who, in turn, alternated for fourteen successive sets. This was varied from time to time by the triangle-bearers waiting until the chanters had circled the fire the required number of times and seated themselves. The triangle dancers then cantered in with a hopping, tripping, graceful step, performed as before, and retired.

There was then a lull of a few minutes, after which for more than an hour the special performers used triangles or wands. The dancing was similar to that of their earlier appearances; sometimes dancing abreast, sometimes face to face.

This was followed by a diversion in which one of the actors was a female (or a man dressed like a woman): first as a little girl, then a young woman, and finally as a man with powdered face through which his mustache showed. These danced many sets until the audience grew tired.

The cactus actors followed. They carried sticks three feet long to which "finger" cactus was profusely tied. There were two of these performers in the first four sets, who danced facing each other like the arrow-bearers. Then came a set in which eight took part, dancing four facing four.

The performance of the setting sun and moon, which followed, was like that of the rising sun and moon save that the rayed disks were now suspended on their backs.

Lightning was represented in the dance that followed by lazy tongs which the special actors carried in front of them. This device, when pressed, would plunge forward some eight or ten feet. At every turn, at every gesture-position in the song, and when presented to the fire as a closing act,

it was thrust forward while its bearer posed in strutting posture. These actions were repeated many times.

The next performance involved bull-roarers. The four actors each carried a long pole from the top of which a small board was suspended by a cord (their leader had also a bull-roarer on a buckskin thong) which they whirled to produce a grating, buzzing noise. The lightning performance was then repeated, followed by several minor ceremonies.

Just before dawn four actors, carrying little trees, came into the enclosure and, after circling the central fire, proceeded to the two patients who had again been placed forward on blankets. After dancing a few minutes, they performed over the patients much as in the arrow dance.

A group now filed in to dance vigorously around the fire for twelve circuits, gesticulating and waving their twigs toward the fire, to the earth, and to the heavens. (The special performers were absent.) Then they filed to the southwestern quarter of the enclosure where the patients still reclined on blankets. Here they formed a screen around the latter, while chanting and waving cedar and piñon twigs. They then seated themselves so as to form a triangle open toward the fire. In the open space in front of the patients there was a dish in which a feathered disk was made to dance vigorously during the whole of the chant. (We noted that two medicine men, sitting opposite one another, waved their hands in unison to the time of the music, while all the other participants waved up and down the bunches of twigs they carried. A string extending from the hand of one medicine man to the other, invisible in the half-darkness, caused the disk to dance.)

The final performance was the fire dance from which the whole ceremony takes its name. Forty-seven men, nude except for breech-clout, entered the dance space and danced, pranced, hopped, and squatted around the central fire many times, acting as though in search of something. Each one carried a long, wrapped bundle of cedar bark. At last they got so close to the fire that one of the actors' bundles caught fire. This he threw toward the east outside of the corral. He lit another and threw it outside to the south, another to the west, and a fourth to the north. Then all lit their bundles and beat one another with them. The torches burned out, they rushed from the dance enclosure, and the audience gathered the charred remains to use as medicine. The sick couple were then taken outside and the dance was over.

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## PIGMENTATION, SUNLIGHT, AND NUTRITIONAL DISEASE

By FREDERICK G. MURRAY

THE series of studies which led to the discovery of the cause and cure of rickets constitutes one of the most brilliant and successful pieces of modern medical research. Three different cures for rickets have been discovered: sunlight,<sup>1</sup> cod liver oil,<sup>2</sup> and ultra violet irradiation by the mercury vapor quartz lamp.<sup>3</sup> Each cure is complete in itself, and all are about equally efficient.

In addition to their value to clinical medicine these discoveries possess marked significance in at least two other rather widely separated fields of science, namely, organic chemistry and anthropology.

The action of sunlight is distinctly chemical in the curing of rickets. The abnormal soft formation of bone in this disease is found to be changed by chemical synthesis of the soluble calcium and phosphorus of the blood into healthy hard bone on exposure of the patient's skin to excessive sunlight.

This new constructive or nutritional use of sunlight or radiation must be clearly distinguished from the older well known destructive uses. As far back as 1894 Finsen of Denmark successfully employed concentrated sunlight or actinic rays to destroy local skin infections, and a little later X-rays and radium came into an ever-widening use in the destruction of tumors, infections, and abnormal tissues generally. But the constructive or nutritional action of the sun's rays were first prominently disclosed in the cure of rickets.<sup>4</sup> This discovery was therefore epochal in medicine and has greatly stimulated interest and research in biochemistry, photodynamics and cure by sunlight of other nutritional diseases like anemia, dental caries, and the malnutrition of tuberculosis and other infections.<sup>5</sup>

To the anthropologist these researches and discoveries in the cure of rickets are believed to be no less interesting and significant.

It has long been recognized that infants of the colored race in the United States are more predisposed to rickets than are the white babies.<sup>6</sup> A much

<sup>1</sup> A. F. Hesse, Newer Aspects of Rickets Problem, Jour. Amer. Medical Association, 78: 1177-83, 1922.

<sup>2</sup> L. Mellanby, Accessory Food Factors in Infant Feeding, Lancet 1: 856-62, 1920.

<sup>3</sup> K. Hohl-chinsky, Heilung von Rachitis durch Kunstliche Hohen-sonne, Deutsch. Klin. Woch. 26: 712, 1919.

<sup>4</sup> J. H. Clark, The Physiological Action of Light, Phys. Rev. 2, No. 4: 642, 1922.

<sup>5</sup> E. M. Lurie, Therapeutic Value of Radiation, Medicine 8: 419-63, 1929.

<sup>6</sup> L. A. Ait, Pediatrics 2: 909, Philadelphia, 1923.

larger proportion of little colored children are seen with bow-legs, square heads, large wrists and misshapen breast bones and ribs, which are the signs of soft rickety bones. The explanation of this came with the knowledge that sunlight through its ultra violet or actinic rays was a preventive of rickets. The pigmented skin offers added resistance to the ultra violet rays, so that it takes a much greater intensity of light on the pigmented, than on the unpigmented skin to produce the same antirachitic effect; that is to cure or prevent rickets.<sup>7</sup>

This antirachitic effect is produced through the irradiation of a certain oil, ergosterol, present in the skin and to a lesser extent in the blood. Under the influence of the sunlight on the skin, ergosterol takes on a new and peculiar property of being able to metabolize the calcium and phosphorus of the blood into normal tissue.<sup>8</sup> It amounts to what is known as a vitamin reaction.<sup>9</sup> Irradiated ergosterol of the skin and blood contains what is called vitamin D as the direct result of the specific action of the ultra violet portion of the sun's light. So called vitamin D is absolutely necessary for normal bone formation in man and animal.<sup>10</sup> A less than normal amount of it results in rickets in the young fast-growing infant or child,<sup>11</sup> and marked and prolonged deficiency in adults leads to a severe form of rickets, known as osteomalacia. Hence, adequate amounts of sunshine or ultra violet light are essential if we are to get our normal amount of vitamin D therefrom.

The farther one goes away from the equator toward the poles, the less intense becomes the ultra violet ray (as well as other rays) in the same exposure to the sun. This comes about from the oblique and hence longer path of the sunlight through the atmosphere to the surface of the earth at high latitudes. That path being much longer at the poles than at the equator, more of the ultra violet rays is filtered out in the longer passage through the resisting atmosphere.<sup>12</sup> Near the poles also the yearly number of hours of sunshine is less than in the sunny tropics on account of clouds, fogs, and

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<sup>7</sup> P. R. Peacock, Quantitative Data in Skin Reactions to Ultra Violet Rays, *Lancet* 2: 369-72, 1925. A. F. Hess, Newer Aspects of Rickets Problem, *Jour. Amer. Medical Assn* 78: 1183.

<sup>8</sup> H. Chick, Relation of Ultra Violet Light to Nutrition Article I, *Lancet* 2: 325-30, 1932.

<sup>9</sup> H. F. Langhorst, Vitamins, Their Role in the Prevention and Treatment of Disease, *Medical Jour and Rec* 135, No. 6: 267-69, 1932.

<sup>10</sup> E. V. McCollum, N. Simmons, J. E. Becker, P. G. Shipley, Experimental Demonstration of the Existence of a Vitamin which Promotes Calcium Deposition, *Jour. Biolog. Chem* 53: 292, 1922.

<sup>11</sup> F. W. Schultz, The Clinical Significance of Vitamin D in Infancy and Childhood, *Jour. Amer. Medical Assn* 99: 384-88, 1932.

<sup>12</sup> E. A. Park, Some Aspects of Rickets, *Can. Medical Assn. Jour.* 26: 3-5, 1932.



mists obstructing the light rays. Thus there is not enough sunlight in far northern regions to prevent a marked tendency to rickets in deeply pigmented man.<sup>11</sup>

Rickets, itself, is not usually a fatal disease, but severe rickets or osteomalacia by deforming the female pelvis, inhibits and finally destroys the reproductive capacity, hence, rickets would tend to the extinction of a colored race in high latitudes where an unpigmented or white race might thrive.

Even white colonists migrating much too far northward and having to depend on extremely small amounts of sunshine, have in historic times, apparently suffered from lack of antirachitic vitamins. Danish scientists recently exhumed ancient skeletons at Herjolfsnes, the site of the Scandinavian colony far north in Greenland which was founded by Eric the Red eleven centuries ago and became extinct six centuries later. They found the gross pelvis deformities of osteomalacia very plentiful and attributed the extinction of the colony to the ravages of this disease.<sup>12</sup>

We have here outlined in simplest terms the factors that can account for the evolution of whiteness or blondness in the so-called Nordic people. As primordial man proceeded northward into less sunlit regions, a disease, rickets, accomplished the extinction of the darker, more pigmented elements of the population as parents and preserved the whiter, less pigmented to reproduce their kind and by progressive selection through prehistoric times, developed and established the white race in far northern Europe as it appears in historic times, its most extreme blond types inhabiting today the interior of the northern-most Scandinavian peninsula.<sup>13</sup>

This discussion of human pigmentation assumes the presence of skin pigment in variable degree of intensity in primordial man or the ancestors of the white race. This agrees with the facts as regards man at the present time. All mankind except the rare and pathological albino have more or less pigment present in their skin. In the race groups and even in most families the individual members may markedly vary in complexion or pigment density. Given such a set up, a variably pigmented population and a besetting disease like rickets which disastrously affects the darker skinned young adults, and it seems extremely likely that any sustained northward migra-

<sup>11</sup> A. F. Hess, and L. J. Unger, An Interpretation of the Seasonal Variation of Rickets, *Am. Journ. Dis. of Children* 22: 186-92, 1921, also note p. 192 quoting L. W. Sambon, *Journ. Trop. Med.* Feb. 15, 1907.

<sup>12</sup> H. Chick, The Relation of Ultra Violet Light to Nutrition, Article II, *Lancet* 2: 383, 1932, citing J. P. Maxwell, *Proc. Roy. Soc. Med.* 23: 639, 1930.

<sup>13</sup> R. H. Whitbeck, *The Geographic Factor*, New York, 1932, p. 93.

tion would tend by natural selection to limit reproduction by the well pigmented and develop blondness in the population generally.

One of the chief difficulties up to now in accounting for the origin of the white or unpigmented race has been the existence of the darkly pigmented Eskimo in these same dark sunless Arctic regions which we have been discussing as the probable original habitat of the white race.<sup>16</sup> The unravelling of the causes of rickets has fully explained this anomaly. The Eskimo though deeply pigmented and living in a dark habitat, nevertheless is notoriously free from rickets.<sup>17</sup> This is due to his subsisting almost exclusively on a fish oil and meat diet. Cod liver oil, as has been stated, is fully as efficient as sunlight in preventing rickets.<sup>18, 2</sup> Now the daily diet of the Eskimo calculated in antirachitic units of cod liver oil equals several times the minimum amount of cod liver oil needed to prevent rickets. Because of his diet of antirachitic fats, it has been unnecessary for the Eskimo to evolve a white skin in the sunless frigid zone. He has not needed to have his skin bleached by countless centuries of evolution to admit more antirachitic sunlight. He probably has the same pigmented skin with which he arrived in the far north ages ago.

On the other hand, the inhabitants of the interior highlands of the far north not using a fish diet or any other generous source of food vitamin D, must needs get most of their antirachitic vitamin from sunlight. If their skins are not sufficiently white to admit large enough amounts of solar radiation for normal bone metabolism, they are subject to rickets and to a natural selection process that in successive generation accomplishes the needed blanching of the skin for survival as a more blond group.

If the criteria of natural selection have any value whatever, it would seem that the interaction of these three factors, namely, food vitamin D, sunlight, and metabolism in rickets, can account in part at least for certain differences in race color in high latitudes: for the blondness of the Scandinavian on the inland plateaus of the sub-arctic and the blackness of the Eskimo on the polar seashores.

The significance of low light intensity and blondness in northern regions strongly tempts one to speculate upon the relation of excessive sunlight and race color in the tropics. Inferences that follow in this discussion may not yet be capable of laboratory proof as are the conclusions that have pre-

<sup>16</sup> C. J. Warden, *The Evolution of Human Behavior*, New York, 1932, p. 179.

<sup>17</sup> H. Chick, *Relation of Ultra Violet Light to Nutrition*, Article II, *Lancet* 2, 582, 1932.

<sup>18</sup> P. G. Shipley, E. A. Park, E. V. McCollum, W. Simmonds, H. T. Parsons, *The Effects of Cod Liver Oil Administered to Rats with Experimental Rickets*, *Jour. Biol. Chem.* 45: 243, 1921.

ceded; but speculation may be here as it has been elsewhere the precursor and incentive to the attainment of exact knowledge and experimental proof.

More clear cut than the dominance of the white man in the comparatively sunless north is the predominance of pigmented races in the sunlit tropics.

There are no white races living native at the equator. By "living native" is meant a considerable white population living for centuries a fully diversified communal life including full exposure of the working class to the climate and sunshine. There is no record of such a successful colonization of whites surviving in the tropics.

The restless white race migrating all over the known world since ever it became differentiated as a race, must have attempted equatorial colonization many times in prehistory. It has attempted it often in historic times and still is attempting it with all the skill, science and manifold armamentaria of modern industry. But all such attempts have been and apparently are doomed to failure: hopeful articles in current journalism to the contrary notwithstanding.

There seems to be something deadly in the tropics to unpigmented man. Is his vulnerability connected with his whiteness, his lack of pigment? Is pigment a protection? This is a fair inference. All the other races, the black, brown, red and yellow live native in the tropics; and the nearer the equator the denser the pigment of their respective skins. There are also on the fringe of the tropics in Arabia, India, Abyssinia and possibly elsewhere, dark skinned race remnants related to and presumably descended from more northern white stock.<sup>15</sup> Milleniums of tropical or subtropical residence apparently have changed the race type mainly in the one feature of skin pigmentation. Reversely paralleling our description of the development of the white race in the sunless north, we can explain the development of the pigmented races on the equator by the action of a tropical disease factor that unfitted the lightly pigmented portion of the population for tropical living and selected the darkly pigmented for reproduction and by progressive selection, developed and established the colored races in the tropical environment as we know them now. Whatever that developmental disease factor was which reacted with skin pigment to establish the colored race, we would expect to find it still functioning against lack of pigmentation. It should still be the deadly foe of the white man in the tropics and account now as always for his absence therefrom as a native or successfully thriving colonist.

Do we find such a tropical disease related in any way with unpigmented skin? Micotic or infectious diseases do not fit the case. Successful colonization of whites would have occurred in spite of all infectious diseases. All

racés, colored and white, have about equal capacity for acquiring immunity to all micotic diseases. If the white race lacks any immunity which the colored races possess, it is because the white race on account of other than infectious disease factors was not allowed time or opportunity in the tropics to acquire that specific immunity. Micotic diseases bear little, if any, relation to skin pigment. And the same may be said of humidity and aridity as disease factors.

It will be objected that there is no deadly tropical disease other than infections, except perhaps sunstroke; but this is avoidable equally by whites and colored alike, and need not concern us here.<sup>19</sup>

It should be noted, however, that rickets is not a deadly disease to the individual even in the severe form that is deadly to the race by inhibiting reproduction. The colored woman with a disastrously deformed rickety pelvis may be enjoying comparatively good health. But we know that the slow unobtrusive metabolic changes, due to deficient sunlight working through a life time or a succession of life times, finally unfitted her for the natural reproduction of life.

Similarly, one might expect from exposure over a long time to excessive sunlight, slow, perhaps cumulative nutritional changes throughout the organism of the unpigmented individual that would perhaps in a totally different manner from rickets yet with equal result unfit the white race for reproduction in the tropics.

Do we find evidence of any such nutritional diseases or disorders presumably due to solar radiation among whites temporarily residing in the tropics or in those white groups which live native closest to the equator?

The most deteriorated white population of the United States, the "poor whites," live on the sunniest slopes of our south Atlantic seaboard, and a still more decayed type of native white inhabits the smiling islands of the British West Indies. In sub-tropical British India it is maintained that few continuously resident white families survive the third generation. In the Philippines severe menstrual disorders are practically universal among white women who accompany the men of our army on their comparatively brief tour of duty there. Many more similar examples could be cited.

In contemplating the constitutional complaints of white residents in the tropics, the one disorder in addition to menstrual irregularities that most persistently and constantly presents itself is tropical neurasthenia.<sup>20</sup> This is the more remarkable since the causes that are usually assigned to neurast-

<sup>19</sup> Chamberlain and Feer, Sunstroke and Heat Exhaustion. *Phillipine Jour. Science* 5: 1, 1910. *Idem*, Blonds and Brunettes in the Phillipine Climate, *Phillipine Jour. Science* 6: 427, 1911.

<sup>20</sup> C. E. Woodruff, *Medical Ethnology*, New York, 1924, pp. 151-53.

themia are absent from the tropics. The hurry, stress and anxieties of industry, of family and social life in the temperate zone are notoriously absent from the tropics, especially for those who have lived some time there and acquired the tempo of the torrid zone. But it is exactly among this long resident white class that tropical neurasthenia occurs most frequently and is most severe.

On the other hand, the various tissues of the nervous system present themselves along with those of the reproductive system as from several angles the most likely to be damaged by excessive light—by photochemical changes in calcium and phosphorus metabolism.

The cells of nerve tissue are very highly organized and complex and hence most vulnerable. We know the least about their physiology and functional metabolism, but they, like the bones, are intimately concerned with the biochemistry of calcium and phosphorus.

The pathology of the so-called functional nervous diseases is of course very obscure or we would not call them functional; but one of the constant findings, especially in neurasthenia, is abnormal calcium salts and phosphates in the urine, betokening some degree of abnormal metabolism of these tissue elements.<sup>21</sup>

There is much to suggest that tropical neurasthenia is the result of too intensive solar radiation, the response of the nervous system to too much ultra violet light absorption through unpigmented skin. There is much to suggest that a symptom-complex, nervous and reproductive, is the evolutionary disease factor that reacted with excessive light and unpigmented skin to prevent survival or colonization of white races and to develop and establish the colored races in the tropics, and that this symptom-complex is still functioning as the dead-line for whites in the torrid zone, just as osteomalacia is the dead-line for colored races in the darkness of the Arctic.

The above suggestions are by no means conclusions, nor is a symptom-complex, nervous and reproductive, the only disease factor that might be accountable for the development of negroid and other dense pigmentation.

Other diseases damaging to young race progenitors in the tropics might be obscurely concerned with undue photosynthesis of calcium and phosphorus. These two minerals are integral to many if not all the body fluids and organs. Conspicuously involving one of these tissue minerals is the protean nutritional disorder arteriosclerosis with its heavy deposits of calcium which can seriously impair any of the finer structures or tissues of the body.

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<sup>21</sup> W. Osler and T. McCrae, *Principles and Practice of Medicine*, New York, 1920, pp 684-86

Food factors, so long confusing to the problem of pigmentation in the Arctic, may complicate the situation in the tropics also. Cereal foods,<sup>22</sup> and the use in diet of the mineral beryllium,<sup>23</sup> have been found to operate exactly opposite to cod liver oil and ultra violet light in the metabolism of calcium and phosphorus.<sup>24</sup> And finally it remains to be mentioned that some other rays of the solar spectrum—some occult effect of the infra red for example—might be involved in eliminating the unpigmented from life near the equator.

In any event there is much evidence for the existence of a nutritional disease factor interacting with excessive light against the well-being or survival of white men in the tropics. This evidence is strengthened by the laboratory proof we have of the interacting of rickets with deficient light against the health of deeply pigmented man in the far north.

Interaction in this latter case we know can definitely influence race color as instanced by the blondness of the Scandinavian. Fuller explanation of negroid pigmentation may come with more extended knowledge of the metabolic effects of prolonged exposure to excessive sunlight.

CEDAR RAPIDS, IOWA

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<sup>22</sup> E. Mellanby, Medical Research Council, Special Rep. Ser. 93, 1925.

<sup>23</sup> H. D. Branion, B. L. Guyatt and H. D. Kay, Beryllium "Rickets," *Jour. Nutrition* 6: 313-24, 1933. Also Editorial, *Jour. Amer. Medical. Assn.* 101: 1080, 1933.

<sup>24</sup> R. C. Clouse, Vitamin D, *Jour. Amer. Medical Assn.* 99: 215-22, 301-309, 1932

DURING the summer of 1933 the writer spent about two months on a Huichol ranch near San Sebastian, a small pueblo in the heart of the eastern Sierra Madre mountains. It was hoped at the time that this would be merely a preliminary visit for purposes of orientation, and that it would be followed up shortly after by a more extensive survey of the life of the people with especial emphasis on psychological behavior. The prospect of an early return now seems remote, so that it was decided to publish whatever information had been obtained in the hope of assisting other investigators who contemplate a visit to that region.

San Sebastian is one of the most accessible of the Huichol villages, yet it lies five difficult days on horseback from Colotlan, where the automobile road ends. The way leads across the mountains, over cliffs and gullies, past the little Mexican settlements of Monte Escobedo and Nostic and then through a very attractive, though almost uninhabited, country to the remote ranches of the Huichol. The ranch of Augustin de la Cruz, "La Ciudad," about an hour's ride from San Sebastian, the nearest pueblo, has an especially attractive location on a hill above a swiftly flowing stream. The houses are built in a circle around a cleared patio, a low stone wall surrounding the whole. One house is for Augustin and his wife, another for his mother and step-father, and a third for his younger brother, Serapio, and his family. Each dwelling has adjoining it a store-house where the special treasures of the family are safeguarded. The largest house of all, built like the others of adobe and stones with a thatched roof, is the "god-house," the casa de los santos, where all religious ceremonies are held and the precious harvest is stored. It was this chapel that was given to us for our home during the time we lived at the Ciudad, and it was from this ranch that we made our excursions into neighboring Huichol territory.

It can hardly be said that the Huichol were pleased with our visit. They have little liking for Mexicans (whom they call *vecinos*, or neighbors), and much less for North Americans, who are all potentially if not actually miners coveting Huichol land for its silver. There are silver mines controlled by Americans at Bolaños, on the edge of the Sierra, and the Huichol cannot understand anyone's making the difficult trip into the mountains without having interests in that direction. They have not forgotten the American who about twenty years ago arranged with the Gobernador at San Sebastian for a fifty year's lease of a large area, and began the work of looking for silver until under cover of a revolutionary skirmish both he and the

Gobernador were killed. The suspicion that we were also miners clung to us most of the summer, and even though our own hosts at the Ciudad became progressively more amiable, there were a great many others who remained hostile. We had official documents which for a time seemed to satisfy them (one or two among them could read Spanish), but even these were later judged to be forgeries, largely at the suggestion of an unfriendly Mexican jefe de armas. This was hardly the best atmosphere for ethnological research, yet it was offset by the fact that we found one or two exceptionally able informants, and that we were allowed to remain in daily and intimate contact with a small group of people in a living and functioning culture.

This daily contact revealed to us a gay and sociable group, emotional, laughing easily and often, quickly aroused to anger and as quickly appeased. They showed little of that phlegmatic disposition popularly attributed to the Indian. It was their busy season, the time for ploughing and planting, but there was leisure for a great deal of conversation and a little music. It was possible not only to obtain formal ethnological material from an informant, but also to learn by direct observation something of the behavior patterns of the group, and of individual differences in these patterns.

Huichol culture in general presents a strange combination of pre-Colombian and Catholic elements, nowhere better illustrated than in their religion. My informant listed for me the following deities—God, the Sun, the Earth, the Moon, Fire, Water, the Sea, Corn Mother, and the "Saints." These "Saints" are large colored pictures kept in the main chapel of the pueblo, although smaller replicas are also to be found over the altar in the private chapels of each ranch. The most important ones, in my informant's Spanish and in the order in which he listed them, are La Virgen de Guadalupe, La Purisima, Maria Soledad, San Sebastian, San José, San Antonio, Jesus, Santo Cristo and San Isidro. No fiesta is held unless the Saints are present.

Fiestas may be given by a single individual, or by a whole community; in either case they are open to all who care to come. They are invariably very social affairs, in fact their main purpose appears to be a social one. The giving of elaborate fiestas brings prestige, but this fact is little stressed in the community. The host is required, among other things, to sacrifice an animal, usually a cow. When the community gives the fiesta, someone is designated by the Cantador or shaman to act as the host, and he is then expected to furnish the animal to be sacrificed. The shaman "dreams" who is to be the host; the Huichol believe that anyone who refused to accept this honor would fall sick and die.



A brief account of the fiestas follows.<sup>1</sup>

*Fiesta de la Virgen de Guadalupe.*<sup>2</sup> Cow sacrificed in late afternoon. At sundown, procession around fire in counter-clockwise direction. Shaman and two assistants sit in special wicker chairs. Offerings placed in front of shaman. Singing throughout the night, led by chief shaman with responses by assistants and others. Inside the chapel, dancing (tap dance variety) to music of violin and guitar. During night offerings presented to Saints. Just before sunrise, Saints are taken out into patio. Shaman points plumes to sun, asking gods to accept the offerings. A chicken is killed, and blood thrown upon Saints. The day is then spent in eating and drinking.

*Fiesta de las Aguas.*<sup>3</sup> Purpose, to bring rain, or if it is still raining, to have the rain continue. As above, except that the chanting consists entirely of prayers for rain. A free translation of a Rain Prayer follows:

O Rain, O the Mothers!  
We shall make a fiesta  
That the rain cease not,  
That it should grow everywhere.  
We shall place candles everywhere.  
Let it rain everywhere without ceasing.  
We shall place gourds everywhere  
Until the grain comes forth again.  
You will decide if it should come forth well.  
I sowed well.  
If you dry it, how shall I sow next year?  
You will see to it that it be successful.  
It not, it will not be our fault.

Rain is of great importance. Huichol word for year is séwitalē, meaning "one rain." Many taboos. If new corn is eaten before Fiesta of the Corn, rain will cease. In that case, necessary to send offerings to mountain peaks, so that they will send rain; also small effigies of animals so that they will not be harmed by lightning.

*Fiesta of the Squashes.* Held late in September. Young squash may not be eaten until after fiesta. Must first be offered to Saints. During night shaman accompanies singing with drum. No feasting or drinking the following day.

*Fiesta of the Green Corn* (Elote). Held late in October. New corn must not be eaten till after fiesta. First offered to Saints. All present wear their finest clothes. Singing throughout day as well as night. During singing shaman uses drum, and is accompanied also by the shaking of rattles by the children. At dawn, a special dance in which men carry bundles of fresh corn which are elaborately clothed as if they were children. A little corn is dropped into the fire. At sunrise all bathe together in the river. Eating and drinking throughout the day.

<sup>1</sup> See also Carl Lumholtz, *Unknown Mexico* (2 vols., New York), 1902.

<sup>2</sup> Witnessed July 14, 1933: private fiesta at ranch of Santa Gertrudis.

<sup>3</sup> Communal fiesta witnessed August 29 at Casa Real in San Sebastian.

*Fiesta of the Harvest.* Held in November. Corn gathered and offered to Saints. Corn is most important article of diet, eaten mainly in form of tortillas.

*Fiesta of the Planting.* Held in April. Begins in morning, day spent in ceremonial planting of corn by men to sound of violin and guitar. Singing throughout the night.

*Fiesta of the Peyote* (Hikuli). Most important of all fiestas. In October, preliminary excursion to Real Catorce, in state of San Luis Potosi, to collect peyote. Fifteen days journey on foot each way. All night ceremonial upon arrival. Prayers. At dawn, arrows are shot into ground in front of peyote; then plant may be eaten. On return journey, faces are painted yellow. Upon arrival, night spent in feasting and eating peyote. Fiesta proper in January. Usual singing through the night. During the day, special dances led by the "angels"—boy and girl dressed in their finest. Peyote is eaten. Has been preserved in ground during winter.

Eating the peyote results in visions among the Huichol as among all other peoples who make use of it. Among the Huichol, however, the visions have a special character, which illustrates very neatly the manner in which cultural patterns may determine individual psychological experiences. All my informants, without a single exception, spoke of seeing the Saints in their peyote visions. They are seen either as very large colored pictures, or as giant men and women walking about in gaily colored clothing. Other things may also be seen—flowers, colors, lights; the sun is heard making a terrific noise; but always there are the Saints. It would appear that the peyote produces visions, possibly colored visions, as a direct physiological effect, but the content or the meaning of the imagery is clearly a cultural phenomenon. It may be added that even the youngest Huichol shows a high "peyote tolerance," and that the unpleasant physiological effects which have so often been reported seem to be entirely absent among them. (This may possibly be due to the fact that the Huichol eat the peyote in the fresh, rather than in the dried, state.)

There is one other vision experience connected with the peyote which is worthy of mention. The Huichol say that while they are collecting the peyote, if they eat a little of it and look from far at the field in which it is growing, the peyote looks like deer. The plants can actually be seen moving about like deer grazing, their antlers close to the earth. Lumholtz reports that the Huichol regard the peyote and the deer as one, and Lévy-Bruhl has used the identification as an instance of his Law of Participation in the thinking of primitive peoples. It is doubtful whether there is any real identification here. My informant told me that he heard the old men say that once upon a time the peyote was a deer, but it lost the power of motion and was stuck fast in the ground. His own opinion was that they were not really the same, but like "brothers;" they merely looked the same when one had eaten peyote.

There was one other fiesta, not listed above, about which I received a little information. This is the fiesta for the inauguration of the new officers, which takes place in the Casa Real in San Sebastian on October 17th. The celebration lasts five days with intermittent dancing and feasting. For this fiesta a leading dancer (tewi) and six assistants (wáynalúle) are appointed. The tewi wears a mask and is evidently a clown, arousing much laughter by his antics.

These dancers are appointed by the Gobernador, who is the most important official in the community. The Huichol have four secular officials: Gobernador, Juez, Capitan and Alguacil or Alcaide. The first two each have one assistant or toupil; the Capitan has under him a Sergente and a Cabo, and the Alguacil is assisted by an Alguareal. The Gobernador is a sort of mayor and has the deciding voice in most communal affairs. He and the Juez together preside over trials. The Capitan represents the police force, acting under the orders of the Gobernador. The Alguacil is the jailor whose duties in former times included whipping prisoners or putting them in the stocks. These forms of punishment have now been abolished at San Sebastian, and offenders are fined or imprisoned or made to work for a time on the Gobernador's land. Formerly prisoners were always confined without food, but that is no longer the case.

The officers are "elected" in a very original manner. The decision lies in the hands, or rather the dreams, of an old man known as the kawitero. On Corpus Christi day the officials each give to the kawitero a bottle of liquor, and tell him to *dream* who their successors are to be. In October they meet with him again to ask the result of his dreams, and he names the new officials. It sometimes happens that in his dream the first man to appear is not acceptable to the people (in the dream) so the kawitero exercises a sort of veto and dreams again. There is never any questioning of his decision. The officials are in this way "elected" for one year, serving without pay.

Besides these secular officials there are five Mayordomos who function in the religious life of the community. Each has his special Saint or Saints to guard, and they are known as the Mayordomo del Cristo, de San José, de la Virgen, de San Sebastian and the Mayordomo de la Purisima. One of their most important duties is to carry the Saints to and from the various fiestas in the vicinity. These officers also serve for a year, except the Mayordomo del Cristo, who functions for five years. They are appointed in dreams, not by the kawitero himself, but by his two assistants. The Mayordomo del Cristo is aided by a Prioste and a Deputado; the others each have one Prioste. In addition each Mayordomo has a tenańcha, a female servant to help keep the Saints and the chapel clean. All these officials, except the

tenañchas, are present at trials and have a part in all communal decisions. The religious group works with the secular, but has very much less power.

There are also two Mexicans who play a part in the government of the community: the schoolteacher (the school is two years old, but has barely begun to function) and the Military Chief of Rural Defense. There is no Catholic priest at San Sebastian.

Though not officially a part of the political organization, the shamans (Spanish, *cantador*, *curandero*; Huichol, *máraakáma*) play an important part in the life of the community, and have a great deal of influence. They function at all fiestas, and are also continually being called upon to cure disease.

The office is more or less hereditary. A man who is a *cantador* will usually teach his songs and his healing art to one of his sons. When the boy is about ten, his father gives him some sort of potion, of which peyote seems to be an important ingredient, and paints the boy's face, after which neither father nor son may eat salt for one month. They journey to the Pacific coast, so that the boy can bathe in the sea. One of my informants who was a *cantador* had been taken twice to the Pacific by his father. He has taken his own son, who is only ten years old, twice already to San Plaza, and plans to take him once every year until he has bathed in the sea six times altogether. Then he will be able to sing and cure very well. In addition the boy listens to the songs of other *cantadores*, especially of his own father, and "dreams" his own new ones. At the age of fifteen, a boy may already function as an assistant *cantador*. Girls may occasionally—though rarely—learn to cure, but they can never lead the chanting in the fiestas.

The Huichol have implicit faith in the power of the *curanderos* to heal. They regard them as infinitely superior to the Mexican physicians, and I could not learn of a single case in which one of the latter had been consulted. Disease is in most cases sent by God as a punishment for sin. It resides in the body in the form of a grain of corn, a piece of crystal, or a tiny stone, which must be removed if the disease is to go; it is sucked out of the body by the *curandero*.

My *curandero* informant showed me how it was done. (I asked him how he would cure me of stomach-ache, and he was evidently not aware of the imaginary character of my illness, since he asked me the next time we met whether I was well again, and expressed gratification at my recovery.) He made me bare my abdomen, then took two bunches of plumes, spat upon them, and moved them from my toes upward along my body to the abdomen, mumbling at the same time. This was repeated once or twice, then the same thing was done from the head downwards, and subsequently from

every direction inward towards the navel, as if the disease were being concentrated at that one point. The feathers were laid aside, the curandero blew on his hands, and then one by one "cracked" all his finger-joints. He repeated the whole brushing procedure, this time using his hands, and again bringing the disease in towards the navel from every direction. Then he put his mouth to the navel, sucked energetically a number of times, and spat out into his hands a considerable quantity of saliva, plus the "disease" in the form of a triangular piece of crystal about one centimeter long and half a centimeter at its base. This he threw away through an opening in the wall of the house, and informed me that the disease was gone.

The cure is always essentially the same, though there are minor variations. In the case of a Huichol who was suffering from a common form of eye disease, evidently a kind of trachoma, the cure was similar except that blood and pus were sucked from the eyes—a not very hygienic, but by no means useless method of treatment; afterwards the inevitable crystal also appeared. In the case of a little girl at our ranch who was feeling poorly, the curandero spat a number of times upon the abdomen and kneaded it actively with his fingers.

Certain other ceremonies are also effective. It is of great value to take some arrows and some perfectly formed gourds containing beads, and to send one set to Real Catorce and another to the temple at Santa Caterina. From these two places water is brought back and thrown over the diseased person. This water has also the power to ward off disease. Sacrifices are important, and a cow may be killed in cases of severe illness. It also helps to light candles, give presents to the Saints, and abstain from salt. It is a good idea as well to confess one's sins to the curandero, who sends away the evil by brushing the patient with plumes dipped in the sacred water. There is no penance attached to this confession, merely a warning not to repeat the offense. One of my informants did this after the death of his first child, confessing his marital infidelity and placing his arrows on the highest mountain peaks at Real Catorce and at Santa Caterina, burying the gourds and the beads in nearby caves. Since then his other children have been ill, but none of them has died, and he is therefore convinced that this technique is effective. When children die it is because the father has committed adultery; that was why his first child died at the age of two, and also why at the same time he lost three cows. If many children die, the grandfather whips the guilty father who has "killed" his children.

Disease is not always a punishment for sin; it may also be sent by a man (usually a curandero) to others. The only details I could learn as to the method were that ten arrows are placed in the ground, and that it is necessary to pray and sing over a fire. My curandero informant said he knew the

technique, but has never used it. The arrows change into a snake, a lion or other dangerous animal, and come to kill the person against whom the incantation has been made. The victim knows he is being attacked, because he sees the animal in a dream. If, in the dream, the animal is killed before he can harm the sleeper, the disease disappears, but if the sick man is killed by the animal in his dream he is sure to die. When a man falls ill in this way, his relatives go to a curandero, who prays in front of the Saints, especially Saint Joseph, and is told during the night who is responsible. If the man dies, the relatives go to the house of the man who has caused his death and beat him severely. I was told of one case three years ago in which the man who sent the disease was put to death. It is believed that young men rarely (one informant said "never") die unless this sort of magic is involved, though old men may die "naturally."

If the healer comes early in the course of the disease he is always successful, but if the disease has been long in the body—two or three years—he can do nothing. Animals are cured in the same way as men, by sucking out the disease.

When a man dies, his body lies for one day in his house. Candles are lit, and all his relatives cry very bitterly. The next day he is buried in his finest clothes, and with him are buried also five miniature tortillas and a little gourd full of water, so that his spirit may eat and drink. The tortillas and the gourd are put on his chest, and he is placed in the ground in the communal cemetery near the Casa Real in San Sebastian.

Five days later there is a gathering of all the relatives and friends in the house of the dead man; they bring meat, fruit, tortillas and other food. All the dead man's belongings are placed in a heap outside the house, and all his live stock is collected in the patio. During the afternoon a cow is sacrificed and in the evening the cantador and his assistants begin to sing of the dead man, telling the story of his whole life throughout the night. The cantador looks for the spirit of the dead man, asking God where it is, and when he receives the answer, he tells the relatives. At dawn the cantador offers all the food and the assembled goods to the spirit, and the ceremony officially ends. The guests spend the day eating and drinking. The property is divided among the sons and daughters according to mutual agreement, though occasionally the distribution has been arranged by the deceased before his death. Some of the less important possessions may go to the more distant relatives. The heirs weep as they divide the property, and recall incidents in the life of the deceased. The cantador tells them that they must weep no longer, and they obey; one informant told me that they no longer feel sad after this short period of mourning has been concluded.

There appears to be no special attitude of fear or reverence attached to

the dead. There is no taboo against touching the corpse, and no praying to the dead, who send neither good nor evil.

The cantador-curandero may occasionally be called in to help during difficult child-birth, his task being to press down upon the woman's abdomen with his hands and to throw sacred water over her. Usually he is not needed. The woman continues with her work until labor begins, then ties a special girdle about her waist, and gives birth in a kneeling position. She does not cry nor groan in labor. She herself cuts the cord, and wipes the baby clean, leaving the placenta in a corner of the house until someone can take it away and bury it so that the dogs cannot eat it. If the woman's mother is present, she sits in a corner of the house praying. For two or three days the woman rests, then goes about her regular duties.

On the afternoon of the fifth day the maternal grandmother lifts up the child and prays to the Saints. "I am going to give the child a name. Let it not die. Let it grow and be strong." The next morning she bathes the child in a large gourd and gives it a name. She takes a piece of cotton, dips it in water, washes the child well, and says, "I name you —."

In this way the child gets its Huichol name. Sample Huichol names in translation are Bracelets of Beads, Dawn, the Yellow One, the Fountain, Beautifully Made, That Which Bubbles, Rose Blossom. Later the child is baptized whenever the Mexican padre happens to be in San Sebastian, and the godparents give it a Spanish name. Many Huichol children are never baptized, and in that case are usually known by the Spanish names of their grandparents.

It is believed that if the child is born during the eighth month it is a girl. If the eighth month passes, it will be a boy. Boys are preferred. Twins are bad luck. Adoption is rare.

Boys and girls play together without restriction of any kind. There are no family avoidances. At about the age of three or four a boy already knows how to use a small bow and arrow. At seven he goes to work with his father in the fields. A girl of four or five can help look after the babies, and at seven or eight she can help with the cooking. Children may receive corporal punishment for disobedience, stealing, etc. (There is no ceremonial whipping at the fiestas.) There are no special ceremonials connected with adolescence. The girl is usually frightened at her first menstruation, but her mother tells her it is the custom among Huichol women. Menstruation is not regarded with horror, and there is no isolation and no suggestion of uncleanness. Puberty is said to occur about the age of sixteen in boys and at fourteen or fifteen in girls. It brings no change in status, as the young man or woman remains in the parents' home until marriage.

Chastity is, at least in theory, the rule before marriage. However, virginity is by no means a prerequisite in the bride. When a boy and girl are caught together, they are usually beaten by the parents and frequently a marriage is arranged. There is also a form of prostitution. Women "servants" work in a household, often living with the man of the house until the wife objects. There was one such woman in Agustin's house; she had a baby with her, but no one knew its father.

Marriage customarily occurs between the ages of twenty and twenty-five in the case of men, and between fifteen and twenty for women. There is no clan system, and no restrictions in the choice of a mate beyond the usual incest prohibitions. What usually happens is that a young man sees a girl who pleases him, though he may never have spoken to her, and he tells his mother that he would like to marry her. His mother never questions his choice, but goes to the girl's mother and asks whether she consents to the arrangement. If she says no, the matter is closed. If she says yes, the boy's mother speaks to her husband, who in turn approaches the father of the girl. He sends for his daughter and explains to her that she is about to be married. It is customary for her to make a semblance of refusal, knowing all the time that it is useless and that she has no choice.

Occasionally the initiative may come from the girl. If she finds a young man particularly attractive she may say so to her mother, who opens negotiations with the mother of the boy. In that case the boy may refuse, even though all four parents are in favor of the match.

When everything has been arranged, the girl's mother asks when the wedding is to be, and the boy's father names the day, usually about a week later. On the afternoon of the wedding day the girl and her parents go to the boy's house, where they are greeted by him and his parents. The young couple kneels, the girl between the two mothers, and the boy between the two fathers. The boy and girl clasp hands, and remain for an hour in this position while they receive advice from the parents. The boy's father says to him, "Behave well. Do not fight with your wife." The girl's mother tells her, "This is to be your home and your bed. You are not coming back with us, but staying here to care for this man and do his bidding." The fathers speak together, and the mothers together. "If my son mistreats your daughter let me know,—" "If my daughter does not treat your son well, tell me about it." At the end of the hour the young people are raised to their feet, and they embrace, each with an arm about the other's shoulders. The parents point to the bed and go out.

There follows a probationary period of five days during which the marriage may be broken by either one. If all goes well, the fathers arrange be-



tween themselves how much the boy is to pay for the girl, the price ranging from about \$5.00 to \$15.00 Mexican. Occasionally this is dispensed with. On the morning of the sixth day there is a Catholic ceremony performed in the chapel by the Mexican priest in the presence of the godparents and other relatives and friends. (If there is no priest around at the time, this ceremony may be delayed for a considerable period.) This is followed by a fiesta at the home of the boy's parents: there is music, dancing and feasting through the night.

There may be divorce by mutual consent, the arrangements being made by both sets of parents with the Gobernador. If the man or woman leaves without any such arrangement, he or she is brought back, punished by imprisonment and subsequently forced to return to the other. If a man knows that his wife has been unfaithful, he may complain to the Gobernador, who causes the woman and her lover to be imprisoned for a month, after which the man may or may not take back his wife, as he wishes. If he does not, he is permitted to remarry. If it is the husband who has been unfaithful, he is also imprisoned for one month, and then has the choice of returning to his wife or remaining with his mistress. In the latter case all his possessions—children, cows, oxen, etc.—are divided between himself and his wife, but it is she who goes away and leaves her former home to her husband and his new wife. If the husband or wife should run away and succeed in evading recapture, the deserted one may remarry after a year.

The economic system of the Huichol is comparatively simple. Land is held in common, and cannot be bought or sold. Any Huichol can cultivate any piece of land which pleases him, if it is not already under cultivation. There is no limit to the amount of land a man may hold as long as he makes use of it, and his holdings may be scattered all over the Huichol country. Usually after using a piece of land two or three years, a man will abandon it for a fresher field. There is strict private property, however, in the produce of the land, as well as in live stock, houses, etc. The Huichol are hospitable and generous, and will lend food to a hungry neighbor if he needs it, but they will expect him to pay it back.

The main products are corn, beans and squash, though in the vicinity of San Sebastian there were also to be found some tomatoes, chile, lemons and one peach orchard a short distance away. Corn is the most important article of barter (money is used, but rarely), as well as the source of food. A man with a good corn crop will exchange what he does not need for livestock, and in that way a young man who starts out with nothing but a field in which to plant corn and a house of stones, straw, and adobe that

his relatives and friends have helped him build, may in time become "wealthy." A man who owns fifty to sixty cows and about \$100.00 Mexican is considered a rich man.

The reactions of the Huichol to the possession of wealth are by no means uniform, some regarding it as of paramount importance, others being quite content with the minimum required for living. Here as in other things, I found the individual differences impressive. Of our three hosts, for example, one, Augustin, was a busy, progressive person, anxious to add to his holdings in land and livestock, eager to adopt what he regarded as the best elements in Mexican life, prepared to work hard and long to achieve his goal. His younger brother, Serapio, was a careless, happy-go-lucky fellow, good-natured, friendly, without any special ambition, content to loll about the patio and play with his two small children, very much interested in the things which money could buy, but unwilling to work to acquire them. Their step-father, Juan Antonio, was a reserved silent man, impractical, introverted, with no concern for worldly goods of any kind. Of the two principal informants, one, Juan Bautista, was friendly, gay, objective, and critical; the other, Ignacio, was solemn and fearful, acquiescing in all the beliefs of his fathers, and a prey to varied suspicions of the magical machinations of a host of enemies. In general this Huichol group gave no support to the formerly accepted theory that personality differences among "primitive" peoples are negligible.

The little group of people living at the ranch, La Ciudad, seemed genuinely friendly. They would come to visit in our hut almost every day, and though conversation was not always very lively, the men spent many hours with us, smoking, talking a little, examining our belongings with evident interest, and enjoying the pictures of American life in our books and magazines. Later on there was music, and Augustin in particular would come in for a while almost every evening with his violin and play a dance tune or sing. These songs are not of any great interest musically, and they show obvious Spanish influences. A few examples follow.

I was especially interested, when I went to the Huichol, in the problem of emotional expression, and in discovering whether their emotional reactions differed in any fundamental ways from ours. My stay among them was too short, and my knowledge of their language consequently too slight to make any thorough study of this kind possible. I had to content myself therefore, with an occasional objective observation which seemed to me to be interesting, even though I could not follow it up to my own satisfaction.

On two occasions I noticed behavior which among us would undoubt-

A SHAMAN'S CHANT



PEYOTE SONG



DEER SONG



LOVE SONG



DANCE TUNE





A



B



C



D

A. Youth with bow. B. A store-house. C. A "chapel," or house of the saints. D. A shaman pointing his plumes at the rising sun.



A



B



C



D



E

A, D, L. Huichol types. B. Hanging the sacrificial cow. C. Ploughing.

edly have been accompanied by an outburst of anger, but which in their case was not reflected in any recognizable facial expression. Once Serapio's wife dropped the baby, which began to cry. Serapio ran into the hut, scolded her very loudly, and hit her twice across the back with his knife. I saw him as he came out immediately after, and he did not look angry. Another time Augustin's wife struck his favorite dog hard enough to make it run off yelping. Without looking back, Augustin continued on his way to our hut, talked with us a few moments apparently unperturbed, then went back and very deliberately hit his wife on the shoulder. The action may have been a coldblooded punishment rather than an "angry" response, but I doubt whether any one among us could have done it in just that way.

Once Serapio's wife fell and hurt herself rather badly. She cried noisily for a long time, but everyone present ignored her completely. Serapio kept on playing with his son, laughing constantly and showing no "sympathy" in any manner which I could recognize.

Tears mean sadness or pain, as with us, but there is also a great deal of ceremonial weeping which is entirely conventional. For example during the all-night singing at the fiestas, there is an interruption by the man who is giving the fiesta. He comes before the shaman with his wife and children, thanks him for his singing, wishes him well, and expresses the hope that all will meet again at the fiesta the year following. During this harangue the host *cries* a great deal. This appears to be a highly conventionalized crying, not expressing any particular emotion, but simply a custom under these specific circumstances. At other times men may cry when someone dies, when they are in pain, when they lose a valuable animal, or when their house burns or falls down. There is no ideal of stoicism, and no opprobrium attaches to a man who cries when he is badly hurt.

The Huichol laugh a great deal. I noticed many examples of a Hobbesian sense of humor—much amusement at the discomfiture of others. It seemed very funny when our guide lost his spurs and looked everywhere for them, or when I took the wrong turn on my way to the river. There was also great laughter at the sight of anything strange or unusual, as when they saw our camping equipment or our methods of preparing and eating our food. It was a little less clear why they should have been convulsed by the sight of the Huichol pictures in Lumholtz, or that they should laugh very heartily when our Mexican mozo said that he did not like the way the Huichol make their tortillas, and that he could not eat them.

Kissing occurs among the Huichol. Parents kiss their small children a great deal, and husband and wife kiss while the wife is still "new." (My

informant estimated "newness" to last about one year, but occasionally kissing occurs later as well.) Boys and girls sometimes kiss before marriage, but brothers and sisters never kiss. Up to about the age of fifteen, boys and girls may kiss their parents on the lips, after that they hug them and kiss their hands. Handkissing is frequent as a sign of respect.

These meagre notes on emotional expression are merely a suggestion in the direction of a field of inquiry which under more favorable conditions should yield valuable material. I regret that here, as in this whole study, I have done little more than scratch the surface.

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## BOOK REVIEWS

### NORTH AMERICA

*History, Ethnology and Anthropology of the Aleut.* WALDEMAR JOCHELSON. (91 pp., 27 figs. Washington. Carnegie Institution of Washington, Publ. 432, 1933.)

Those who have eagerly awaited this companion to Dr Jochelson's *Archaeological Investigations in the Aleutian Islands* (1925) will be somewhat disappointed in the decidedly scanty data within its covers. Nearly one-half of the pages are devoted to annotated excerpts from the accounts of the Aleuts given by the members of Bering's expedition and by the missionary, Ivan Veniaminov. The remainder consists of outline chapters devoted to modern economic activities (sealing, fishing, etc.), cultural activities, the kinship system, mythology (three pages), physical types, and measures of time and space. In the kinship designations appear definite features usually characteristic of classificatory systems but there is little discussion of their bearing on the social organization. The avuncular relation is remarkably like that of the Tlingit and neighboring tribes—residence in the house of the maternal uncle who carried out a strict disciplinary training over his nephews. It is to be hoped that the material presented does not represent all that can be salvaged of Aleut ethnology.

R. L. OLSON

*Ancient Aztalan.* S. A. BARRETT. (Bulletin of the Public Museum of the City of Milwaukee, 13. 602 pp., 100 pls., 161 figs., 2 maps. \$7.00. Milwaukee: Public Museum, 1933.)

*The Excavation of the Ross Mound Group I.* PHILIP NASH. (Same series, 16, no. 1. 46 pp., 9 pls., 8 figs., 1 map. \$0.60. Milwaukee: Public Museum, 1933.)

*The Red Cedar River Variant of the Wisconsin Hopewell Culture.* L. R. COOPER. (Same series, 16, No. 2. 62 pp., 10 pls., 4 figs., 1 map. \$0.75. Milwaukee: Public Museum, 1933.)

Each of the publications describes a distinct and unrelated aboriginal culture in Wisconsin. The director of the Milwaukee Public Museum, Dr S. A. Barrett, is to be complimented for maintaining during this economic distress the high standard of their archeological publications as well as presenting one of the most detailed and comprehensive accounts of a new Wisconsin culture.

"Ancient Aztalan" describes for the first time a Middle Mississippi culture, located south and southeast of the present town of Aztalan, Jefferson County, Wisconsin. The author has continued his usual painstakingly precise description of all evidence recovered from the site. Every possible viewpoint is clearly set forth and the necessary ethnological and historical correlation has been included. The reader may feel that too much description has been given to incidental details, nevertheless, one must realize that here is not only an exceptional variant of a southern culture existing as far north as southeastern Wisconsin but a site which has unquestion-



ably produced a definite complex of material characteristics not heretofore described. The artifacts, arranged and reproduced in an excellent manner, are similar to some recovered from Cahokia as described by W. K. Moorehead. All structural features such as cross sections and floor plans are included in detailed large scale drawings. cross sections of potsherds, incised designs, pottery forms, and drawings of stone, bone and shell artifacts are reproduced as plates.

The most important feature described is the earthwork surrounding the site west of the river, a four sided inclosure surrounding twenty-one acres. No burial indications were found in these earth-works but definite evidence that they had been used as foundations for a stockade of close-set posts, the walls plastered, gates well guarded, and watch-towers. Within this stockade was located the village site and evidence of two other smaller stockades.

Aztalan the author considers a northern extension, though a variant, of a Middle Mississippi Valley culture. He does not, however, refer to any specific southern aboriginal culture, but merely a general southern phase. The village site within the inclosure gave evidence of both "Columbian" and pre-Columbian occupation. He concludes that the site was occupied for a considerable length of time by a rather large population.

Definite records were obtained concerning their houses.

Such meager evidence as we did secure points to the probability that Aztalan houses were built of wood, one circular one being built of logs set vertically as in the stockades, and a rectangular one being built apparently of horizontal poles fastened to upright posts set at appropriate intervals. One instance was found which indicated the use of wattling. Together with these meager facts we have one other bit of evidence which is very telling. There is every indication that the walls of these structures were plastered with the material which when subjected to heat became "brick."

Numerous pits containing European objects had been dug into older pits but it was impossible to segregate the material in order to establish definite stratigraphy, although it may indicate that the original inhabitants of Aztalan continued to occupy the site into the historic period. However, no historical references are cited by the author to establish this possibility.

The outstanding material culture, aside from the southern pottery, upon which is based the relationship with the Middle Mississippi phase, consists of truncated pyramidal mounds; base notched triangular projectile points; ear spools of stone, bone and pottery; disc shell beads; large chipped chert hoes; and perforated shell implements. Since it is impossible to demonstrate any relationship between the material culture from Aztalan with the well known aboriginal cultures in the surrounding areas, no time or culture horizon could be established. The evidence of copper has led the author to believe that other unrelated tribes inhabited the site both before and after it had been abandoned by the true Aztalan inhabitants (pages 344-45).

A striking feature indicated here is the evidence of non-ceremonial cannibalism. One cannot help but feel that Barrett is correct in his conclusion that human flesh

was a common article of food. Several skulls were recovered showing that they had been broken for the brains; innumerable long bones were cracked for the marrow; dismembered arms, legs and a hand with the bones articulated were found in pits. One skull had the atlas, epistropheus and third cervical vertebra articulated, the third cervical showed signs of cutting with a stone knife. All of these bones were associated with the usual animal and fish bones in the refuse pits. Barrett estimates that over five per cent of the bones recovered from these rubbish deposits were human.

Summarizing all the facts now available relating to Aztalan, we may conclude that this was a village of moderate antiquity, very specially protected by strong palisades, of close-set posts averaging about a foot in diameter and projecting about twelve feet above the surface. At regular intervals were watch-towers for the special defense of the stockade, and entrance to the village was gained through special gates. On the landward side the stockade was a triple one, and throughout the walls were covered, probably within and without, with a plaster made of a mixture of clay and grass, which when burned became "brick."

Within this protection was the village, consisting of houses, both rectangular and circular, made of wood and plastered after the manner of the stockade. Here were "brick" fireplaces and "brick"-lined baking pits.

The people lived upon the products of the locality, seeds, nuts, berries, fish, shell fish, birds and mammals. But most striking of all is the apparent amount of human flesh consumed, not merely, it would seem, as a ceremonial rite, but actually as an article of diet.

In the arts and crafts they were well advanced, utilizing bone, shell, antler, stone in many forms, sheet copper, and making excellent pottery.

In certain of these manufactories, particularly in the use of Gulf Coast shells and in the elaborateness of the pottery we trace a very strong connection with the Middle or even Lower Mississippi Valley region. Add to these a large earthen platform, a truncated pyramid and a terraced, truncated pyramid, the use of plastered walls and a variety of other elements, and we have a southern picture so complete that we must conclude that we have here a northern extension and variant of the Middle Mississippi phase of culture which has caused the actual formation of a southern island in this northern territory, which is otherwise Upper Mississippi, and Woodland throughout.

The publication's only shortcoming is its lack of anthropometric data from the few burials and numerous disarticulated long bones and skulls found on the site. These data might have led to a more specific determination in regard to the physical types found as intrusive burials when compared with the single burial which the author believes belonged to the original Aztalan group. Then too the bones from the refuse pits should have been identified as to age and sex. This would have indicated whether or not the bones might have belonged to adult male captives, often eaten by Indians in that region.

In "The Excavation of the Ross Mound Group I" Philleo Nash gives a concise and well illustrated report of his excavations of mounds in Wood County, central Wisconsin. This prehistoric group of mounds unquestionably belongs to the most widespread aboriginal culture in the southeastern quarter of the state, that known as "Effigy Mound Culture." Due to limited time and funds, the mounds were trenched, as this well established complex readily lends itself to this particular technique.

The effigy, conical, oval and pointed linear mounds contained the characteristic cultural features, e.g., foreign material in definite strata; curvilinear pits; calcined mammal bones; fireplaces, with and without bone fragments; pecked stone artifacts; and cord marked, stone tempered pottery. No depressed floors were present. Even though no human burials were encountered, the author concludes the presence of curvilinear burial pits would seem to indicate that skeletal material had been present which was—due to environmental conditions—completely disintegrated. The potsherds are of uniform type and compare closely with the characteristic "Lake Michigan" ware.

In "The Red Cedar River Variant of the Wisconsin Hopewell Culture," L. R. Cooper describes a new Wisconsin *Focus* of the "Hopewellian" *Phase* located on the western border of the Mississippi highland in Barron County, Wisconsin, 150 miles north of the well known Trempealeau *Focus*. The "Hopewellian" characteristics of the site consist of a few potsherds with roulette roughened surfaces; cut animal jaws; ornaments of bear canine teeth; copper beads, awls and celts; stone projectiles and knives. The mounds were conical, containing prepared floors and stratified lensing. The burials were extended in the flesh as well as disarticulated, cremated and compound. Some of these were surrounded with log moulds and associated with bark in rectilinear sub-floor pits. He describes in detail the first recorded discovery of two life-size funerary baked clay masks found in association with calcined bones of the skull (plates 16 and 17). The author is to be complimented on his restoration of one of these masks and his detailed description of both.

On page 78 the author speaks of five burial methods, four of which were made either in pits or on slightly raised platforms. In the same paragraph he speaks of cremated burials extended in the flesh. No illustration is given either in the floor plans or plates of this burial method. Yet in a table of comparative mound and burial traits, he stars as present "extended-in-the-flesh burials" as well as "cremated." He should distinguish between the more typical cremated burials and burials extended in the flesh, but instead he considers this one as evidence of both types of burials. His table of comparative traits would be more explicit if he had listed the total number of traits present as well as the percentage instead of using stars to indicate characteristics recovered in contrast to those absent.

FRANK M. SETZLER

*Bulletin of the Society for Pennsylvania Archaeology*. A. I. HALLOWELL, ed. (Vols. 1-2, 1930-31.) Continued as *The Pennsylvania Archaeologist*. GUS. M. STEINMETZ, ed. (Vol. 3, Nos. 1-6. Harrisburg, Pa.: Society for Pennsylvania Archaeology, 1932-34.)

The Society for Pennsylvania Archaeology is to be congratulated for preserving the pictographic records which might have been lost with the construction of Safe Harbor dam and the subsequent flooding of the Susquehanna valley. Its archaeologist, Donald A. Cadzow, has made plaster moulds together with charts, scale models and photographic records, and some have been removed bodily to the State Mu-

seum. In Vol. 3, No. 1: 3-7, 14-15 he outlines his methods. They are worthy of notice.

Dr Frank G. Speck contributes his "Impressions of Bone Implements from Safe Harbor," interpreting them in the light of his knowledge of similar forms still in use among the Naskapi (Vol. 1, No. 2: 4-6). He distinguishes pipe-cleaners, radius awls, knives, bone splinter fish hooks possibly used with set-lines, art motives reminiscent of both Algonkian and Iroquois, and the possibility of some artifacts being paint brushes: all artifacts the Naskapi might recognize.

Arthur Woodward makes a plea for the preservation and study of Indian trade goods, indicating their importance for determining the age of specific sites (Vol. 3, No. 1: 8-9, 16-19). He calls the attention of archaeologists to the so-called 'Jesuit Silver,' a misnomer; demonstrating that much of it is referable to the late eighteenth century. In another article, "Wampum and Its Uses" (Vol. 3, Nos 5-6), he outlines the history of trade beads and contributes interpretations of wampum belt symbolism.

Another issue (Vol. 3, No. 4) contains M. R. Harrington's "The Life of a Lenape Boy" which is welcome material.

It is regrettable that Mrs Skinner has not included more of the traditions of the Cornplanter Seneca, so little is known about them (Vol. 3, No. 5: 3-5).

The Society has published stimulating articles by A. C. Parker and J. Alden Mason which should indicate objectives and direction to local specialists.

Edgar B. Howard has surveyed the problem of grooved projectile points, the so-called "Yuma" and "Folsom" types, suggesting the possibility of relation with similar forms more widely distributed (Vol. 3, No. 6: 11-15, 2 pls.). He requests notice of their occurrence in private or other collections, and whether or not they were found on sites containing pottery.

This Bulletin is a convenient vehicle for discussion: it contains book reviews and citations of early Pennsylvania sources. Unfortunately, "early writers" are sometimes recalled without indicating whom (Vol. 3, No. 4: 21). There are notes on field methods, preservation of specimens, and pottery restoration.

WILLIAM N. FENTON

*Yuman Tribes of the Gila River.* LESLIE SPIER. (xviii, 433 pp., 15 figs., 15 pls. \$4.00. Chicago: University of Chicago Press, 1933.)

This is one of the best ethnographic volumes yet done for North America. Binding and copyright notwithstanding, it is a genuinely scientific monograph, free from abridgment or suppression of evidence with sales motivation. The one concession to the reader is an increased plasticity and coloring of the author's naturally compact style, which in the past has occasionally verged almost on over-conciseness. The standard throughout is the high one of Spier's Havasupai and Klamath, the execution a shade more finished.

The peoples dealt with are those officially and popularly called Maricopa. Actually these are today a mixture of five Yuman tribes that until a bare century ago

maintained separate existences. Below the Maricopa on the Gila were the Kavelchadom—probably respectively the Cocomaricopa and Opa of Kino and his successors. On the Colorado below the Mohave were the Halchidhoma, below the Yuma the Kohuana and Halyikwamai—all well known to the Spaniards, some of them since 1540. In the first quarter of the nineteenth century, the three tribes on the Colorado were increasingly wasted by wars with the Mohave and Yuma, until between 1825 and 1840 they as well as the diminished Kavelchadom settled among the Maricopa, who had lately moved some thirty or forty miles up the Gila. These recent events are the basis for the constantly repeated error that the Maricopa moved off the Colorado within historic time.

The allotment of space is about thus: tribal and historical, 47 pages; subsistence, 34; houses and dress, 22; manufactures, 34; time reckoning and knowledge, 16; social relations, including war and dancing, 82; religion, 74; individual development, 35; tales, 78.

A few items of special interest may be singled out for mention. Speech relations: Maricopa-Kavelchadom-Halchidhoma similar to Yuma, more different from Mohave and Walapai-Yavapai, Kohuana-Halyikwamai close to Cocopa (which coincides with reviewer's findings). All river Yuman cultures very similar; "all lowland Arizona tribes shared a single culture" (p. 41); Pima borrowed as heavily from Maricopa as reverse (*ibid.*). Two plantings a year, but mesquite more important than farming; considerable fishing; little mescal, more sahuaro, intoxicant from latter only. Cotton growing and weaving (p. 110). Notched stick annals. Six-term calendar repeated in year, names referring to crops and sibs (p. 143). Foray warfare against Yavapai, formalized battles with Yuma. Sib system and names (pp. 186, 196); kinship plan not related to this nor to social usages (p. 209). Dream experience fundamental in religion. Song cycles less mythical in content than on Colorado; intertribal comparison (p. 260); character of music (by G. Herzog, p. 271); witchcraft, shamanism, soul-loss (p. 280); Halchidhoma mourning ceremony with image (305). Apt "sayings" though no proverbs (p. 331 *passim*).

This volume is at once a real book and an important contribution of new data and new understanding.

A. L. KROEBER

## AFRICA AND OCEANIA

*Social Organisation and Ceremonial Institutions of the Bomvana.* P. A. W. COOK. (171 pp. Cape Town and Johannesburg. Juta and Co., 1931.)

*Proverbes et Maximes Peuls et Toucouleurs, traduits, expliqués et annotés.* HENRI GADEN. (Tr. et Mém. de l'Institut d'Ethnologie, 16. 368 pp., index. Paris, 1931.)

*Das alte Königreich Kongo* ALEXANDER IHLE. (Studien zur Volkerkunde, 1. Geh. mk. 7. Leipzig: Verlag der Werkgemeinschaft, 1929.)

*Züge aus der politischen Organisation afrikanischer Völker und Staaten.* GUNTHER SPANNAUS. (Studien zur Volkerkunde, 2. Geh. mk. 7. Leipzig: Verlag der Werkgemeinschaft, 1929.)

These four volumes, which span the continent of Africa and represent analyses of various phases of African cultures, present some valuable contributions to African ethnology, and, at least in the case of three of them, reach the high standard that is coming to be expected in studies of African peoples. Their value will be evident from the brief analyses of their contents which follow.

Of the four, it is only the book on the Bomvana that is deficient, and even this is a useful compendium of objectively observed fact concerning the tribe of which the author writes, though it falls far below the quality of work that the past decade has seen produced by students of South African ethnology. This is particularly apparent when the author makes any attempt to probe beneath the surface of the culture he is describing, and, as might be expected, is seen most often in his discussion of religious beliefs and practises. Yet even in social organization, the manner in which he fails to indicate how the system of sib organization (termed "clan," despite the fact that it is of a patrilinear order) is linked up with what would seem to be a socio-political series of groupings called *inkabi*—to give but one example—shows that this failure to attain depth in his explanations holds for all aspects of the life of the people which transcend outward behavior. The book, however, does give a workable outline of Bomvana relationship terminology, family life, and political institutions. Especially well discussed is the all-pervading rôle played by cattle in this culture.

Properly speaking, the volume by M Gaden is not ethnology, but folklore, dealing only with one folkloristic medium—the proverb. Yet by virtue of the fact that the author departs from the time-honored manner of merely listing his maxims one after the other, and gives not only the translation of each, but its significance to the native, as well as instances when it would be employed, he succeeds in so placing these sayings in their cultural setting that a vivid picture of the inner life and sanctions of the people who use them may be derived from reading them. The arrangement of his data indicates to what extent this is true, particularly when, in connection with one or another of the proverbs he devotes a page, or two, or sometimes three or four pages to a discussion of magic, or concepts concerning animals, or marriage customs, or social stratification, or the belief in ghosts. Beginning his catalogue with proverbs concerning emotional life and the family, he lists those dealing with friends and enemies, with vengeance, with the necessity of choosing one's friends carefully; with marriage, divorce, and the mother-in-law; with the household and the family; with neighbors and with children. Next comes a chapter devoted to maxims concerning power; those which name the king, his courtiers and his officials, which detail the limits of power, and which preach that a person must give way before those who wield greater power. Going on, M Gaden lists proverbs dealing with the good and the bad, with character, courage and intelligence, with such sentiments as pride, egotism, ambition, and cupidity, with the use of words for dissimulation, with discretion and indiscretion, and hypocrisy; he continues with proverbs having to do with benevolence and avarice, the recognition of ingratitude, honesty, dishonesty, and practical wisdom. In the chap-

ter which includes proverbs grouped under the heading "Life," the relationship between man and the world in which he lives is shown. Finally, there are chapters dealing with the importance of observing tradition, with sayings of a general nature, and with those aphorisms of the Fouta of Senegal which concern the country, its inhabitants and its past. Merely to mention the fact that this collection comprises 1282 proverbs is to indicate its richness; the resumé given of the arrangement of the proverbs indicates to what extent proverbs offers one of the best means of gaining insight into the psychology of the African, and how M Gaden, in giving not only the proverbs but their meaning and their use, has at the same time made a major contribution to this little exploited approach to the study of African life.

The two works discussed above represent the results of field study; the two which remain derive from library research, the first being historical, the second a distributional study that aids in filling out the mapping of ethnographic traits for the continent as a whole along the lines which Lindblom, and, to a less reliable degree, Frobenius, have employed.

A most useful portion of the volume by Dr Ihle is the bibliography, an exhaustive list of books and papers which includes works dating from the earliest times of Portuguese exploration and settlement in the sixteenth and seventeenth centuries to the present. His results are presented in two divisions; one detailing the historical development of the Kingdom of Kongo, the other abstracting from the literature an ethnographic picture of life as it is lived there in the times of native autonomy. To indicate what detail has been achieved, it is perhaps only necessary to state that he maps the approximate boundaries not only of the territory of the kingdom, but the limits of the six provinces which composed it. After a discussion of the founding of the kingdom—something, in the nature of things, that is recounted in accordance with folkloristic accounts recorded by the early travellers—he gives the succession of rulers from the beginning of the sixteenth century to the time of its overthrow. Then follows the ethnographic reconstruction; as might be expected, the travellers were more interested in giving details of the life of the rulers and their court than they were of describing the life of the common folk, hence it is the political system that is most fully detailed, while social organization, religion, and economic life come in for merely minor remark.

Dr Spannaus has also worked painstakingly, as his bibliography amply indicates. The thirteen maps he presents at the end of his volume constitute the heart of his findings, and give his book its value. The technique he employs of spot-mapping the aspects of kingship and political organization must meet the approval of all who feel that this method is far superior to the more usual one of enclosing areas by conventional boundary lines, yet much of the value of maps in this work is lost because of his failure to identify the tribes indicated by the map-points. A numbered list of the tribes represented by the spots, crosses, and triangles is given following each map, yet had these numbers been placed on the maps themselves, this would have greatly enhanced their usefulness and significance. The discussion of the data on which his mapping is based is comprised under fifteen headings, each includ-

ing a group of tribes living in a contiguous area. It is perhaps questionable whether it would not have been somewhat more advantageous to make these regions less numerous; this could have been done without sacrificing anything of the fineness of classification. It is also to be questioned whether the fact that royal descent is in the maternal or paternal line, something that he makes preéminent in his categories, is as significant as Dr Spannaus would seem to make it. However, since a description of other aspects of the political life of Africa are also given, this does not detract materially from his presentation. With many of his conclusions one may well take issue, especially with that which holds that rank and the kingly office in Africa are prevailingly held by those of Hamitic origin.

MELVILLE J. HERSKOVITS

*Bambuti: die Zwerge vom Kongo.* PAUL SCHEBESTA. (270 pp., 89 illus., 3 maps. 11.50M. Leipzig: Brockhaus, 1932.)

This is Father Schebesta's provisional and semipopular report of his trip to the Pygmies of the Ituri forest, 1929-30. Confronted with the possibility of either rapidly surveying all the groups within the area or concentrating on a single Pygmy division he chose the former alternative. However, he is reported as being now en route for a more intensive investigation.

Two specific findings are of general interest. While other Pygmy groups speak the language of their Negro hosts, the author regards the Efé as a tribe with distinctive, hence presumably with a truly Pygmy language (p. 215). Secondly, while the other groups studied use the fire drill, the Bakango are entirely ignorant of fire-making, though not of the use of fire (p. 74).

The Pygmies must at one time have been economically independent but at present they are unable to get along by themselves notwithstanding their acknowledged skill as elephant hunters and in the chase generally. They have come to depend on the bananas and other plants raised by Negroes of the region, giving in return such tribute as a particular Negro patron demands (p. 39ff.). Since the Negro tribes themselves vary considerably in the details of their cultural equipment, the Pygmies present corresponding differences. The difficulty of reconstructing the proto-Pygmy culture is thus obvious. Thus, all Pygmies are nowadays divided into lineages (*Sippen*) and totemic clans (*Clans*), the lineages are invariably exogamous, the clans frequently. Schebesta plausibly conceives the institution as a loan from the Negroes (p. 110). The same is suggested for circumcision (p. 93) and the entire initiation complex as described, which includes the bull-roarer (p. 152f.). On the other hand there are Negro traits which evidently do not find favor: witchcraft and ancestor worship do not seem well developed (pp. 147, 152), and marriage by exchange asserts itself against bride purchase (p. 109).

The photographs are excellent. Ethnographers will watch with interest Father Schebesta's new findings.

ROBERT H. LOWIE



*Valenge Women. An Ethnographic Study.* E. DORA EARTHY. (251 pp., 23 plates, 1 map. \$9.00. London: Oxford University Press, 1933.)

This book is a report of the author's personal research among the Valenge (southern Portuguese East Africa). The book is of great value, not only to students of African ethnology, but to all anthropologists, no matter what their particular field may be. The originality of the research lies in the method of approach through a sympathetic and intimate study of the social, religious, and economic life of women, a subject for whose investigation male anthropologists are at an obvious disadvantage. Chapters dealing with pregnancy, parturition, and the secret rites for initiation of girls clearly demonstrate the advantages of research by a woman. The account of initiation rites for girls is probably the most complete that has yet been published for any Bantu Negro tribe.

The introduction states that this specialized aspect of research has a general background in H. Junod's "Life of a South African Tribe." There is an advantage in having a general study, geographical, historical, and ethnological, before approaching the investigation of a culture from some particular aspect, such as sex, food, or magic. Without the general groundwork, specialized approach may be misleading in its emphasis of one or more traits.

The introduction rightly emphasises the need for making our studies dynamic and not too formal. Sympathetic research is concerned with the working of a culture, and with adjustments to new conditions arising from culture contacts. But to get to the soul of a people an approach through study of material things, including collecting of objects, is sometimes the best method.

The book begins with an account of the origin and history of the Valenge by consideration of their tribal traditions; while personal and clan names are also used as evidence. In addition to the aspects of tribal life which only a woman can thoroughly investigate, other factors are well described. A particularly valuable section on the ritual aspects of scarification should dispel assumptions that body marking is primarily a matter of personal ornament. The study is well balanced without undue emphasis being placed on any factor, and a reader is allowed to judge for himself what is pivotal without having some particularly "functional" factor chosen for him.

A map of the sibs is valuable in showing their geographical distribution, and a brief index is provided. A bibliography, especially one dealing with the South African Journal of Science, Bantu Studies, and other periodicals relating to the ethnology of south Africa, would have been a valuable addition. However complete a monograph may be, the author is mistaken in not associating his research with that which has already been published. There exist, for example, several articles relating to divination by bones, a subject which E. D. Earthy reports in detail.

The use of phonetic spelling throughout the text and on the map, wherever African words are used, raises a question of cost in relation to academic advantages. It is true that there are twenty-three photographic plates of excellent quality, but the book is of moderate size, and the high price must in part be due to the general

use of phonetic characters. Could academic requirements be met by having a glossary of words, phonetically spelled, at the end of the book?

The book is an original and valuable example of ethnological research, and the general production preserves the high standard set by previous volumes published under the auspices of the International Institute of African Languages and Cultures.

WILFRID D. HAMBLY

*Documents Néo-Calédoniens*. MAURICE LEENHARDT. (Travaux et Memoires de l'Institut d'Ethnologie IX. 514 pp. 125 francs. Paris, 1932.)

The Institute of Ethnology of the University of Paris has added a valuable collection of documents from New Caledonia to its other publications on that island and we are indebted to M Leenhardt for a carefully prepared set of documents which may be used in several ways. The documents are of various types. The larger number are myths and folk tales, including the long cycle of the lizard. Then there are a considerable number of chants or songs mostly built around the themes of victory in war and a call to arms. For one of the chants the music is given in the appendix. Interesting also are the speeches which are recorded. These deal with a variety of subjects, among which are a speech against an enemy people, words of sympathy said at time of death, greetings to a maternal uncle, speeches made at the time of birth and circumcision, and a declaration of war. For most of these documents, the text is given with both an interlinear translation and a smooth, free translation. There are also a large number of explanatory and interesting footnotes. Because of the interlinear translations, the book is of decided value to the linguist, and the anthropologist can never have too many accurately recorded texts such as these, particularly about this relatively little known area.

HORTENSE POWDERMAKER

## PHYSICAL ANTHROPOLOGY

*Functional Affinities of Man, Monkeys, and Apes. A study of the bearings of physiology and behavior on the taxonomy and phylogeny of lemurs, monkeys, apes, and man*. S. ZUCKERMAN. (xviii, 203 pp., 24 plates, 11 tables. \$3.00. New York: Harcourt, Brace and Company, 1933.)

This book gives a taxonomic and phylogenetic survey of the findings of diverse experimental investigations of lemurs, monkeys, and apes. So far as I know, this information has not been considered collectively from this point of view before. Students of mammalian classification seldom pay much attention to experimental biology, and experimental biologists as a rule have little time for taxonomy and phylogeny. . . . The functional characters which merit most consideration in the classification of the Primates are those which show some degree of correlation not only amongst themselves, but also with characters [to be found] in other fields of primate studies. I have freely used the term "functional character" to refer to any character that is revealed by methods used in the investigation of the dynamic, rather than the static aspects of organisms. In any case the distinction between function and structure in taxonomic discussion is probably largely artificial, since all the processes of the body presumably have a

physical basis; gross structure may therefore be regarded as the expression of the peculiarities of chemical processes.

From the point of view thus explained in his Foreword (pp. xi and xvii) Doctor Zuckerman surveys the widely scattered literature of non-human primate physiology and psychology together with enough of the more recent contributions to primate taxonomy to serve as a medium of comparison between the results of studies in the "static" and "dynamic" fields.

Work in the dynamic field is now being pushed forward with more vigor than is generally realized. No less than 186 of the 273 titles listed in the bibliography pertain to studies of this nature, and no less than 147 of these 186 studies have been published since 1920. No attempt to summarize all this new information and to correlate it with the results of taxonomic work has hitherto been made. In my opinion no one is better fitted than Doctor Zuckerman to undertake this task.

After three chapters given over to preliminary discussions of primate classification the main subject matter of the book is grouped under the following headings:

- The differentiation of the mechanisms of reproduction

- The differentiation of blood reactions

- The differentiation of receptor organs and their functions

- The differentiation of behavior patterns

- The diseases and parasites of the primates

- Hybridization, affinity, and divergence

- The psychological measure of intelligence in primates

- The brain as a measure of intelligence in the suborder Pithecoidea

- The phylogenetic implications of cortical physiology

- The evolution of primate behavior

- Functional differentiation in relation to the evidence of morphology and palaeontology.

The review of these subjects leads to the conclusion that "the facts regarding the generative functions, the blood, purine metabolism, perceptor organs, and behavior patterns . . . are mostly consistent with the taxonomic point of view" (p. 139).

The last five chapters of the book are those that are likely to be of greatest interest to anthropologists. They give a good idea, in convenient form, of the present state of the stimulatingly chaotic controversy about man's place—physically, palaeontologically and behaviorally—among the primates. As one reads them it becomes increasingly clear that despite the efforts that have been made to lay a firm foundation for reasoning in this field, the facts are still too few. The field stubbornly remains an open one in which all comers are free to play the game of wits. But its boundaries are so wide and its topography is so insecure under the constant impact of new observations that the game is not without its hazards. Some of these seem to have imperiled Doctor Zuckerman himself.

Thus he might have hesitated to make the sweeping statement that among the Old World primates apart from man "the females do not appear to have any con-

trol over their own disposal" (p. 111) had he ever watched, as I have done, the ease with which either of two female mangabies in the National Zoological Park was able to block the assaults of the larger and stronger male cage mate, one of them by the simple device of clinging perpendicularly against the bars of the cage with her pelvis up and her head down, the other still more simply by lying flat on the floor. His opinion on this subject, and on the extreme importance of dominance in non-human primate groups seems to have been unduly influenced by his well known studies of baboons, primates in which the males exceed the females in size and strength to a degree that is very unusual if not wholly exceptional. McCann's important observations on the family groupings of wild hoolok gibbons (Journ. Bombay Nat. Hist. Soc. 36:395-405, April 15, 1933), might have furnished a useful corrective, had it appeared in time. (It is well known that in all gibbons the sexes are essentially equal in size and in the development of their long canine teeth. No trace of habitual male dominance has yet been recorded as occurring among them.<sup>1</sup>) With regard to the breeding season of the New World monkeys we find the unqualified assertion (p. 29) that "the only acceptable data . . . show that they too breed at all times." This is a dangerously positive position to assume without specifically disposing of the data that led Wislocki to suggest the probability that all the Central American monkeys of the genera *Saimiri*, *Oedipomidas* and *Aotus* have definite breeding seasons (Carnegie Inst. Contrib. Embryol., No. 133: 177-78, November, 1930). Finally I may mention an allusion to "man's monogamous habit" as something apart from man's cultural equipment of "speech, fire, tools, etc." (p. 156). If I have correctly understood this passage Doctor Zuckerman is at odds with the widely prevalent opinion that all forms of marriage are cultural phenomena; but perhaps his words are nothing more than unintentional echos from the teachings of a departed age.

These things, however, and a few others like them, are only superficial blemishes. They detract little from the genuine usefulness of the book.

G. S. MILLER

*Man and the Vertebrates*. ALFRED SHERWOOD ROMER. (vii, 427 pp., 278 figs., addenda. \$3.00. Chicago: University of Chicago Press, 1933.)

Some universities have lately been considering plans for re-gathering the scattered cohorts of Biology into a single comprehensive elementary course. The present text is one of the results of such a plan at the University of Chicago. With texts such as this the plan should go far on its way to success.

Professor Romer's book surveys the history of the vertebrates without omission of significant facts and with due regard for the three-fold series of evidences—

<sup>1</sup> Of a New World primate, the howler monkey of Panama, Carpenter has recently said that the females "are more aggressive than the males in sexual activity" and that "males have not been observed to behave aggressively toward females and dominate them during the sex act" (Comp. Psychol. Monogr. 10, No. 2:91, May, 1934).

embryology, comparative anatomy, and palaeontology. The material is well organized and presented clearly, interestingly, even dramatically. The language is sufficiently simple with a minimum of technicality. The illustrations are carefully chosen and well executed.

The author has chosen to deal largely with the history of structures and does not enter the field of physiology, presumably to be covered by another text. Even so, he finds it advisable to devote half the volume to a discussion of man, his origin, his speciation, morphology and embryology. The palaeontology of man receives extended treatment, important finds being reviewed and brief attention devoted to early artifacts and other cultural remains. In discussing human racial history the author acknowledges indebtedness to the ideas of his colleague Dr Griffith Taylor. He divides modern man into five groups on the basis of skull proportions and hair characters as major features, skin color and shape of nose as minor ones. He recognizes the Negroids, Australoids, Mediterraneans, Alpines and Mongoloids; placing the so-called Nordics with the Mediterraneans and Hindus, and regarding the brachycephalic Alpines and Mongoloids as "a final major event in the evolution of man." The idea of a common origin of Alpines and Mongoloids as contrasted with other "white" races is most interesting.

CHARLES L. CAMP

*Tabellen zur Berechnung der Ohrhöhe des Kopfes.* LOTHAR LOEFFLER. (5 tables. Rm. 31. Jena: Justav Fischer, 1932.)

This work, planned after the pattern of Furst's *Index Tabellen*, offers five tables which facilitate the calculation of head height from two measurements taken with an ordinary spreading caliper. The measurements are trignon to trignon and bregma to trignon. The formula from which height is reckoned is  $\sqrt{(t-b)^2 + \left(\frac{t-t}{2}\right)^2}$ , in which  $(t-t)$  is distance between tragia, and  $(t-b)$  distance from trignon to bregma.

The tables are very useful in calculating the height of the skull. Since bregma is almost impossible to find accurately on the living, the use in cephalometry is restricted. My own laboratory experimentation with this method has not yielded very satisfactory results in the case of living subjects, because of this difficulty in locating bregma.

EARNEST A. HOOTON

*Zur Kenntnis der Anthropologie der Prähistorischen Bevölkerung der Insel Cypern.*

CARL M. FURST. (Lunds Universitets Årsskrift, n.f., Avd. 2, Bd. 29, nr. 6. Kungl. Fysiografiska Sällskapets Handlingar, n.f., Bd. 44, nr. 6. 106 pp., 52 figures, 48 plates. 10 Kr. Lund, Sweden, 1933.)

It is a remarkable situation that in spite of the long and intensive study of classical archaeology very little light has been shed on the physical characters of the ancients of the Greek world. Part of this can, of course, be attributed to the wretched condition in which most of the skeletal remains are found. But too frequently the lust for loot with which to impress expedition supporters has resulted in a total lack of interest in the associated bones.

Moreover, the absence of an adequate body of valid data concerning the Greeks has not inhibited the deductions of elaborate racial hypotheses. It is, therefore, with enhanced interest that one peruses the rare contributions to the physical anthropology of the ancient Greeks. Dr Carl M. Furst has been a distinguished contributor to our knowledge in this field, and in the present publication he has again added to our meagre store.

The Swedish archaeological expedition to Cyprus in 1927-1931 under the leadership of Einar Gjerstad excavated at Lapithos, Melia and Enkomi. The skeletal material was carefully preserved and shipped to Furst for study. Although the condition of the skulls was bad, Furst has made a careful study of what was available. Most of the skulls date from the middle and late Bronze age and from the Iron age. Lapithos, formerly a port, contained a population of dolichocephalic type mixed with round heads of Armenoid stock. Melia, a more remote site, appears to have been rather more homogeneous and strongly Armenoid in its affinities. Enkomi, although a harbor with a mixed population, likewise is rather more Armenoid. Furst believes that the Armenoid type settled in Melia and Enkomi about 1600 B.C. Traces of other Asiatic and African types were also found in the population.

Three types of deformation were commonly practised on these Cypriote skulls: a "classical," elongated form, a fronto-occipital variety emphasizing the Armenoid type of skull, and a third, indigenous to Cyprus, in which the skull was flattened from above, producing a bulbous forehead, a projecting occiput, and a low, broad skull.

It is to be regretted that the sexes were not separated and that a more complete statistical summary, not only of the indices but of the component measurements, was not presented.

H. L. SHAPIRO

#### MISCELLANEOUS

*Our Primitive Contemporaries.* GEORGE PETER MURDOCK. (xxii, 614 pp., 117 figs., 3 pls. College ed., \$3.60, trade ed., \$5.00. New York: Macmillan, 1934.)

This is the most useful recent simplification of selected ethnographic materials known to the reviewer. The book is sufficient to acquaint the general reader or college student with a fair sampling of the unfamiliar and non-European peoples. Each of the eighteen cultures is described as a unified account of a mode of life. Yet the conventional ethnographic topics are, in fact, treated in each account, and in about the same order, so that the materials lend themselves to a simple comparative treatment. At least a few lines are given in each case to the habitat, linguistic affiliations and present cultural condition of the group described. The selection of peoples has been made with regard both to the geographic range to be covered and to the wide differences in complexity of cultures. The book has been assembled with care; there are few typographical errors; names are correctly spelled; good bibliographies are appended to each chapter; there is an index.

ROBERT REDFIELD

*Form in Primitive Music. An Analytical and Comparative Study of the Melodic Form of Some Ancient Southern California Indian Songs.* HELEN H. ROBERTS (180 pp. \$3.50. New York: American Library of Musicology, W. W. Norton and Co., 1933.)

As the subtitle indicates, this is the study of a specific musical style rather than a general discussion of primitive musical form. Miss Roberts offers a well worked out monograph on American Indian music, and the number of these is still deplorably small. The book includes twenty-five songs recorded from old Luiseño informants at Pala, of which fifteen are attributed to the Luiseño, five to the Gabrielino, and five to the Catalineño. All the songs are presented with text and translation, and two with instrumental accompaniment. They are followed by a section devoted to analysis, one treating of general features, one on tonal material, a few pages on musical instruments of the Luiseño, and a bibliography. The analysis of tonality and structure is workmanlike in quality. There may be details of minor importance where a different interpretation is possible, but it would be difficult to find any study of primitive music in which different investigators could not place different emphasis on minor points, perhaps with equal justification.

In view of the care with which the literature has been consulted on linguistic and ceremonial detail, it is regrettable that the author could not include in her study a comparison with musical material which is closely related to hers, that of the Yuman tribes in southern Arizona and southern California. The style of the Shoshonean tribes in southern California, treated by her, is practically identical with that of the Yumans, to the extent that the description of one reads like a description of the other. The author's "rise" (p. 149, etc.) is the Yuman "rise"<sup>1</sup>—the most outstanding feature of the style: melodic elaboration upwards, by the occasional imitation, etc., of part of the melody on a higher level. The three main forms of this "rise" and the extensions caused by it ("internal incrementation," "terminal" increment or extension, "initial" extension, p. 150) also have specific counterparts in the Yuman style.<sup>2</sup> Other identical traits are: in melody, the balance of ascending and descending curves, "paired and reversed" (p. 151); in rhythm, the free use of three-unit rhythms and their insertion into rhythms of two or four units (cf. p. 151).

These and other interesting parallels leave no doubt that the style described for the Yuman river tribes and the Southern Diegueño dominates also among the Shoshoneans of the southern Californian coast. The extension of this style, or at least the distribution of its salient trait, the "rise," is likely to prove of interest when traced. The Southern Paiute mourning songs, as was to be expected, are definitely in this same style.<sup>3</sup> I have recently pointed out Central Californian (Yuki and Pomo) occurrences of the trait also. Isolated examples are found at places where they least

<sup>1</sup> See the reviewer's study on The Yuman Musical Style, JAF 41: 183-231, 1928; for the "rise," pp. 193, 194, 196, etc.

<sup>2</sup> *Op. cit.*, p. 198.

<sup>3</sup> According to a manuscript of Southern Paiute songs, containing transcriptions by the late J. Sapir of records taken by Dr Edward Sapir. For the perusal of the manuscript I am indebted to Dr Sapir.

might be expected; thus, a gambling song of the Klallam shows the "rise" unmistakably<sup>4</sup>—evidence for the spread of gambling songs along the Pacific slope. Miss Densmore, who has lately given ample additional material from Yuman tribes (Yuman and Yaqui Music, Bureau of American Ethnology, Bulletin 110, 1932) has reported similar forms from the Southeast.<sup>5</sup> Confirmation of this statement by the publication of Miss Densmore's collection is awaited with great interest, the more so since Creek and Yuchi songs already published also indicate the presence of such forms in the Southeast.<sup>6</sup>

In the light of these distributions, the study of musical instruments associated with the trait in question is of additional importance. Miss Roberts' remarks on Luiseño musical instruments (pp. 173-75) contribute to our information. They have been written perhaps with an eye turned too much toward the Pacific, which may be misleading to the lay reader for whom the book was also written. Thus the parallel between the Luiseño use of the flute for love and Polynesian usage (p. 174, fn. 154) becomes less suggestive if one considers the very widespread use of flutes and flageolets in North America for love melodies and very often for nothing else. The instrument consisting of two plain sticks struck together has its parallels not only in Polynesia (pp. 174-75), but also in North America.<sup>7</sup> A mention of these distributions here on American soil would prevent what the author probably did not intend, but what the lay reader might easily take to be implied, a notion of the migration of these instruments across the Pacific from Polynesia into California. The unexplained basket drum is hardly related to the notched stick which has an inverted basket for its resonator,<sup>8</sup> a possibility left open by Miss Roberts. As the informants denied the use of a (notched stick) rasp with the instrument, but mentioned scraping, it must be the basket scraped with a little stick, such as has been reported from the region contiguous with the Shoshoneans in southern California.<sup>9</sup>

<sup>4</sup> Review of F. Densmore, Yuman and Yaqui Music, in *Zeitschrift für Vergleichende Musikwissenschaft* 1: 4: 91-93, and pp. 31-32 of the Music Examples, 1933. See also the Concow and Karok (!) songs in Powers, *Tribes of California*, opposite p. 28.

<sup>5</sup> A resemblance between Yuman and Pueblo songs, AA 34: 694-700, 1932; see pp. 698-99 for the Seminole.

<sup>6</sup> F. G. Speck and J. D. Sapir, *Ceremonial Songs of the Creek and Yuchi Indians*, UPM-AP 1: 2: 158-245, 1911. See for instance all the songs of the Creek Crazy Dance, pp. 190-97.

<sup>7</sup> To the references quoted by C. Sachs is his *Geist und Werden der Musikinstrumente* (p. 16, Queen Charlotte islands, Thompson river, Choctaw) may be added, among others, the Diegueño (Waterman, *The Religious Practices of the Diegueño Indians*, UC-PAAE 8: 6: 309, plate 26: 2, 3), Mohave (two bundles of stems are struck together: Kroeber, *Handbook of the Indians of California*, p. 764), Wind River Shoshoni (Lowie, AMNH-AP 16: 5: 394), Omaha (La Flesche, JAF 2: 7, 1889), and Menominee (Densmore, *Menominee Music*, pp. 60, 65).

<sup>8</sup> This form, in turn, is not used by the Pueblo who, as far as I know, employ a gourd or pumpkin for a resonator, but by other tribes in the Southwest like the Havasupai, Pima, Papago, etc., and the Ute.

<sup>9</sup> For instance, presumably Diegueño (Spier, *Southern Diegueño Customs*, p. 349), Yuma (Herzog, JAF 41: 189-90) and Papago (Densmore, *Handbook of the Collection of Musical Instruments in the U. S. National Museum*, p. 70).



The mention of a type of rattle consisting of a bag containing stones is welcome: it probably refers to the skin- or hide-bag rattle, the occurrence of which seems to be sporadic in California.

Miss Roberts does not discuss the question of European influence, but it is noteworthy to find it strongly suggested in certain of the songs, as for example Nos. 22 and 25. In addition to musical information, the book offers suggestions on points that may be of interest to students of the ethnology of southern California. Its chief value, however, is that it adds one to the small number of competent studies so far published on American Indian Music.

GEORGE HERZOG

*An Ethnic Survey of Woonsocket, Rhode Island.* BESSIE BLOOM WESSEL. (289 pp., 69 tables. \$4.00. Chicago: University of Chicago Press, 1931).

Using the children and families represented in the public schools as an index to the whole population, the author collected data on racial stock, nationality, language, social ideals, intermarriage and the like in an effort to determine the ethnic composition of the community. On the basis of these data she attempts to answer questions concerning the diverse racial elements present in the population, their extent and rate of fusion, and the progress of their amalgamation into American social life.

As a whole the study impresses one as painstaking and competent. Additional interest is gained by the fact that it represents an attempt to apply ethnological methods to a social survey of a modern community with quite satisfactory results. The chief criticism which may apply is that the author's "ethnic" stocks seem really to be national or natio-geographic groups.

FORREST CLEMENTS

*Criminology.* ROBERT H. GAULT. (461 pp. \$3.50. Boston and New York: D.C. Heath and Co., 1932.)

This textbook approaches its subject along psychologic and pathologic lines rather than from the usual sociological point of view. Its thesis, presented with admirable precision and clarity, is that criminal personality is mainly a product of social contacts. Criminal attitudes develop out of numberless reactions to environment, such reactions being facilitated or impeded by innate capacities. Comprehensive data on psychopathic personalities, organic drives, intelligence and emotion, together with material on disease, race, sex, age, inheritance and personal attitudes, are brought together in one volume for the first time. These data supplemented by the abundant use of case material provide an eminently solid foundation for the lucid discussion of criminal treatment, penal institutions, court procedure and methods of obtaining evidence. The book concludes with an account of training methods for police and prison officials and the programs of criminologic research institutes. Finally, the author presents a plan for a crime prevention bureau.

Dr Gault has produced a scientifically sound and most worth-while book, but one lucidly written and free from the pedantry characteristic of so many works on criminology.

FORREST CLEMENTS

*Tales of the North American Indians.* STITH THOMPSON. (xxiii, 386 pp., 1 map. Cambridge: Harvard University Press, 1929.)

*Motif-Index of Folk-Literature. Vol. I: A-C; II: D-E.* STITH THOMPSON. (Indiana University Studies XIX, June, September, 1932: Studies Nos. 96, 97. Same series, XX, June, 1933: Study No. 100. Bloomington, Ind.: Indiana University Library.)

The initial and oft repeated impetus given by Boas to trenchant folktale studies resulted in several contributions of primary importance, notably his own, those of Lowie, Waterman, Reichard and others. This was well more than a decade ago. Since that time, the vast enlargement of native mythology has acted as a strong deterrent to its use. During this fallow period the only constructive attempts to deal with this difficulty have come from Prof Stith Thompson, a non-anthropologist and one who is not, strictly speaking, primarily an American folklorist.

"Tales of the North American Indians" presents aboriginal mythology to the general reader in a scholarly and dignified manner. Although the author's first interest is in giving a roster of tale-types, he has not disregarded the cultural background. His comparative notes are delegated by tribe to their respective culture areas, thereby making the ethnic affiliations of each motif instantly recognizable (pp. 270-360). His bibliography comprises all the usual sources and many obscure ones: all and more than could be asked in a work intended for general consumption. That this bibliography should be used without revision as the source for his world-index seems unfortunate, yet the author may feel that it is the duty of anthropologists to incorporate the new data.

While anthropologists may quarrel with his classification of tales and motifs, there are few who have not turned in gratitude to this compilation of references which can be relied upon as a basic guide through a maze of chaotic data.

Two early papers of Prof Thompson,<sup>1</sup> as well as his appreciative attitude toward the work of American folklorists (*Tales*, pp. xvi, 271) show him aware of the historical and cultural problems implicit in myth material. Yet, recognizing that the solution of these problems is contingent upon the availability of the evidence, he has assumed the onerous task of categorizing all motifs of folk-literature throughout the world. His *Motif-Index* is an outgrowth of his revision of Aarne's "Types of the Folk-tale"<sup>2</sup> which he found too limited in scope.

<sup>1</sup> *European Tales among the North American Indians* (Colorado College Publications, Language Series, II, 1919); *The Transmission of Folk-tales* (Gayley Anniversary Volume, University of California Publications in Philology, vol. 11, 1922).

<sup>2</sup> FF Communications, No. 74, Helsingfors, 1928.

The Index is sincerely conceived in the belief that an order comparable to that used in the biological sciences may be imposed upon mythology (Motif-Index, p. 2). Cultural material has been given a biological analogy before, but here, at least, it is not inept, for of all cultural manifestations there is none which so lends itself to the demonstration of growth processes, hybridization, and mutation as folktale material. It may be argued that an absolute index of this type is the idealistic penultimate of all concordances, catalogues, and indices in a particular field, but is it the type most desirable for handling American Indian mythology?

Prof Thompson's Index is a catalogue of motif-minutiæ arranged on what is substantially a purely logical basis in which the structure of each tale is disregarded, and its cultural, i.e., national, tribal, or geographical, placement but incidentally indicated. The anthropologist is interested in folktales only as cultural evidence, and while he sorely needs a guide of some sort, there is no reason why some aspect of the end should not be included in the means.

Thus, the first fact of interest concerning any tale is its provenience, second, its relation to other tales from the same source; third, its relation to those from other sources. As regards the tale itself, its whole structure is of interest before any of its constituents are. And the constituents are important only in so far as they are native or foreign to their particular locale. Such a procedure of classification points toward a scheme comparable to the abstract-with-comparative-notes method used by Boas in his analytical work. The latter method is not usually regarded as a cataloguing scheme, yet actually it functions as such, as a mechanism leading to proof or disproof of a variety of cultural facts.

It is emphatically desirable that a common system of classification be agreed upon and adhered to by the codifiers of Indian folktales: if private systems are used in each regional or topical index, the situation will be only slightly less confusing than at present. Could such a code be constructed by such specialists as Boas, Parsons, Benedict, Gunther, and Beckwith, it would serve not only as a solution to the immediate problem of sorting accumulated material, but also as a terminological framework into which incidentally collected tales could be fitted by the general ethnographer. But if it is to be accepted by anthropologists in general, it must be the product of cooperation from several persons experienced in the technique of tale analysis in order that it may be rendered fool-proof, of more than local application, and forever durable.

The Motif-Index of Folk-Literature is of great value as a world-index which necessarily must include material of the most diverse sorts and must rise above the demands of any specific field of research. Though this index does not fulfill the particular needs of the American Indian folklorist, Prof Thompson's colossal work, which he presents with such engaging modesty, is a challenge to anthropologists to produce one that will.

A. H. GAYTON

## SOME NEW PUBLICATIONS

### *North America*

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## DISCUSSION AND CORRESPONDENCE

### OÛNEBIGONCHELINIS CONFOUNDED WITH WINNEBAGO<sup>1</sup>

In the synonymy at the close of the article *Winnebago* in the Handbook of American Indians<sup>2</sup> and in the synonymy at the end of the Handbook, Ouenibigonchelinis is equated with Winnebago. This identification is demonstrably incorrect. It is fitting for a member of the Bureau of American Ethnology, rather than an outsider, to rectify the matter. First it should be understood that the synonymies at the close of the various articles were not necessarily compiled by the author(s) of the articles, and it is not possible at this late date to determine who was responsible for the error; so I can blame no one.

The authority for Ouenibigonchelinis given in the Handbook is La Potherie, *Histoire de l'Amérique Septentrionale*, I: 131. So far so good. But whoever compiled the synonymy excerpted this item from La Potherie without reference to the context, where it is definitely stated to be the name of a tribe that came to trade at Fort Nelson, Hudson bay, etc.; and a few words of the language of this people are given which are very, very obviously Algonquian, whereas Winnebago is Siouan. The compiler simply seized the word and inserted it because of the obvious resemblance to Winnebago, for any tyro in American linguistics can see that the posterior portion of the word in question means "men." The prior portion thereof linguistically is identical with Winnebago, the etymology of which is a matter of common knowledge.

The explanation is that we have two distinct peoples with names practically identical. Parallels for this are well-known; e.g., "Savanoos," applied by the Dutch to Indians on the east bank of the Delaware river, New Jersey, does not mean specifically "Shawnees," but "southerners."

The passage in La Potherie's *Histoire* is now more available in Documents Relating to the Early History of Hudson Bay:<sup>3</sup> see letters V and VII of the Narrative, where will be found a reproduction of the French original and an English translation. On p. 262, footnote 1, the learned editor (Tyrell) correctly identifies Ouenibigonchelinis<sup>4</sup> but does not refer in any way to the Handbook. It is therefore my duty to correct this error.

TRUMAN MICHELSON

BUREAU OF AMERICAN ETHNOLOGY  
WASHINGTON, D.C.

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<sup>1</sup> Printed by courtesy of the Smithsonian Institution.

<sup>2</sup> BAE-B 30, pt 2, 1910.

<sup>3</sup> Publications, Champlain Society XVIII (Toronto), 1931.

<sup>4</sup> It seems clear to me that the Ouenibigonchelinis can not be separated from the Winnipégo-wug who inhabit the shores of James and Hudson's bay and who hunt inland only for a very short distance, according to Alanson Skinner (Notes on the Eastern Cree and Northern Saulteaux, AMNH-AP IX. 9). Skinner himself does not discuss Ouenibigonchelinis nor does he

## THE AZTEC CALENDAR STONE

On page 791, Vol. 35, No. 4. of the *AMERICAN ANTHROPOLOGIST*, of October-December 1933, there appears a short article by Mr Frederick S. Dellenbaugh, which is the newest thing in fantastic interpretations of the Aztec Calendar.

If it were merely one of that legion of newspaper articles dealing with supposed Egyptian, Caldean, Jewish, Phoenician, Greek, Roman, Chinese or Japanese influence on the culture of the American Indian, or with the contact of the Atlantida or with the land of Moo, it would not be worth while refuting; but as the article is published in a scientific review of the standing of the *AMERICAN ANTHROPOLOGIST*, I consider a reply necessary, since there are many learned members of the American Anthropological Association who are not conversant with Mexican archaeology and who would be easily misled by Mr Dellenbaugh's idea that the Aztec Calendar is a "mariner's compass" or "Rose of the Winds."

The general interpretation of this monument, as a representation of the solar disk, has been long since admitted by every real scholar of Mexican archaeology; and it could not be otherwise, for the thirty-two details that so puzzle Mr Dellenbaugh are to be seen on innumerable pre-hispanic monoliths and codex-pictures that are undoubted representations of the Sun. If the figure of the Aztec Calendar is a puzzle to Mr Dellenbaugh, it is simply due to the fact that he is not acquainted with other similar representations depicted on stones and codices.

Why did not Mr Dellenbaugh, before publishing his discovery, read some of the works dealing with the subject, such as Mr Hermann Beyer's monograph, Dr Seler's articles, and so on?

All this shows that in the field of Mexican archaeology, it is becoming more and more difficult to "discover America after Columbus" and that one is in danger of meeting with puzzles and "mariner's compasses" in matters that have been long ago elucidated.

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## ON "EXPRESSION" IN INDIAN SINGING

The following excerpt from a paper by Miss Alice C. Fletcher on "The Study of Indian Music" may be of interest to students at the present time. It was pre-

mentioned La Potherie in his bibliography (pp 176, 177). The Rev Dr Cooper calls my attention to Wenipākoo-eyīnew, given by Watkins. A Dictionary of the Cree Language, with the meaning "A coast Indian" (ā is long close ē, e is i) which also is not in the synonymy of the Handbook. This, of course, is the form in a y dialect, that is one in which original / is replaced by y. He also kindly furnishes me dialectic variations of Wenipākoo-eyīnew with the same meaning from both sides of James bay taken from his own unpublished material, and notes that at Fort George we have the plural of the prior member of the compound meaning "coastal people." I have silently corrected an inaccurate citation of the Handbook. The variant Ouenebigonnhelinis (La Potherie, *loc cit*, I:122-174) is important

sented to the National Academy of Sciences on March 2, 1915. Miss Fletcher said: "Thirty-five years of acquaintance with Indian music gathered from tribes of different linguistic families widely scattered over North America, and a study, still in progress, of the music of a particular group has revealed facts relative to their music and its uses that possess an anthropologic value. . . . For over twenty-five years I have used the graphophone when engaged in the field study of native ceremonies containing rituals and songs. . . . In a general way, an Indian singer makes no special effort, nor is he much concerned, to present his song in such a way as to give to the listener a musical picture. Practically no attempt is made to give what we call 'expression.' The song is apt to move along in strict time; any change or break in the time or rhythm disrupts the flow of the music and, to the Indian, destroys the symmetry of the song. . . . To a degree, it may be said that the Indian does not listen to his song as something objective to himself, yet he is found to be keenly aware of any slight change in the rhythm or tones of a melody—any mistake in the rendition of a song. . . . Years of experience has shown an unfailing demand for accuracy in the transcription and reproduction of a song. . . . In this . . . is discerned one of the very early steps in the long path that leads to an artistic development of music."

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## NOTES AND NEWS

### GRANTS OF THE SOCIAL SCIENCE RESEARCH COUNCIL

The Social Science Research Council announces the award of forty-six grants-in-aid of research, fourteen new fellowship appointments, and one fellowship re-appointment for a period of one year. The grants-in-aid total \$22,175; the fellowships, slightly over \$48,000.

The Council wishes to call attention to *two additional series* of training fellowships in the social sciences which will be offered for the first time for 1935-36. One of the new series will be known as Pre-Doctoral Fellowships for Graduate Study, and will be open to citizens of the United States or Canada not over twenty-five years of age who will not have been enrolled in any graduate school for more than one semester before July 1, 1935. Their purpose is to aid exceptionally promising students of the social sciences to obtain research training beginning with the first year of graduate study. The other new series will be known as Pre-Doctoral Field Fellowships, and will be open to citizens of the United States or Canada not over twenty-seven years of age who are candidates for the Ph.D. degree, and who will have completed prior to the end of the academic year 1934-35 all courses and examinations for which they are eligible before completion of the thesis. The purpose of these Field Fellowships is to supplement formal graduate study by opportunities for field work which will assure first-hand familiarity with the data of social science in the making. The Post-Doctoral Training Fellowships will again be offered under policies and regulations similar to those previously in effect.

The closing date for the receipt of applications for Grants-in-aid for the academic year 1935-36 will be January 15, 1935; for Pre-Doctoral Field Fellowships and Post-Doctoral Training Fellowships, December 1, 1934; for Pre-Doctoral Fellowships for Graduate Study, December 15, 1934. In order to facilitate the filing of applications on the proper blanks before the closing dates, it is requested that persons interested communicate with the Secretary for Fellowships and Grants-in-aid, 230 Park Avenue, New York, N.Y., as early in the fall of 1934 as possible. The first letter of inquiry should include a brief statement of the candidate's proposed plan of work and of his academic and professional record.

A list of the appointments of anthropological interest for the academic year 1934-35 follows:

#### *Grants-in-aid*

Cora Du Bois, Research Associate in Anthropology, University of California, to aid in the completion of a study of cult religions among the Oregon Indians.

Thomas R. Garth, Professor of Psychology, University of Denver, to aid in the completion of a study of the intelligence of foster Indian children in white homes.

A. I. Hallowell, Assistant Professor of Anthropology, University of Pennsylvania, to aid in an investigation of the ethnology of the Berens River Saulteaux.

*Fellowships*

Kalervo Oberg, Fellow of the International Institute of African Languages and Culture at the London School of Economics, for a study in culture contact in an East African tribe

Bronson Price, Research Associate of the Medico-Biological Institute in Moscow, for study in Russia of the psychological traits of human populations from biometric approaches; factors influencing changes in demographic statistics.

## A NOTE ON PONCHO RUIN, UTAH

An Associated Press report originating unofficially from geological members of the Rainbow Bridge—Monument Valley Expedition occupied in reconnaissance in northern Arizona and southern Utah during the summer of 1933, to the effect that members of the Expedition had been guided by a local amateur archaeologist to a hitherto unreported cliff ruin of large extent in lower Chinlee creek, when checked up was found subject to qualification. The cliff remains are known as Poncho House, and were discovered in 1875 by W. H. Jackson and described by him in 1878 in his Report on Ancient Ruins Excavated in 1875-1877, in the Tenth Annual Report of the U. S. Geological and Geographical Survey in the Territories (1878). The site was further examined in 1923 by S. J. Guernsey of the Peabody Museum of Harvard University. It was reported on by him with plans in his Explorations in Northeast Arizona (Peabody Museum, 1931). The visit told of in news dispatches this summer was a brief diversion on the part of non-archaeological members of the body now in the field in a little known but not at all unknown area of the southwest United States. While there was no spectacular "find" such as was implied in news given out personally and unauthoritatively, the Expedition through its archaeological group did come upon a large number of unrecorded sites of early age, from which important and valuable information has been obtained.

LYNDON L. HARGRAVE

HENRY WASSÉN, of the Gothenburg Museum, Sweden, has received a scholarship to pursue the study of the Choco Indians of northwest Colombia as a continuation of the work of the late Erland Nordenskiöld (*American Scandinavian Review*, Spring 1934, p. 82).

THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, Wilkes-Barre, Pa., announces that a few copies of Christopher Wren's "A Study of North Appalachian Indian Pottery," published in 1914, and long reported out of print, are now available.

GENERAL HUGH LENOX SCOTT, who in earlier years contributed to the ethnology of the Plains Indians, died April 31 in Baltimore. Among his writings were "Early History and the Names of the Arapaho" (1907) and "Notes on the Kado, or Sun Dance of the Kiowa" (1911) published in this journal.

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THE SACRED CLOWNS OF THE  
PUEBLO AND MAYO-YAQUI INDIANS

By ELSIE CLEWS PARSONS  
AND RALPH L. BEALS

INTRODUCTION (By ECP)

THE Pueblo clowns or, in Bandelier's not altogether adequate terms, the Delight makers are well known figures; outside of Sonora the Mayo and Yaqui clowns were unknown until Dr Beals made their acquaintance in 1931 in the course of his study of the Cahita-speaking peoples. The Sonora clowns come out during the Lenten season and at that time in 1932 I had joined Beals at Navajoa for a glimpse at the Cahita culture as it might be compared with that of the Pueblos.

It was the Fifth Friday, the *Fiesteros* were making the stations of the Cross at San Ignacio, and we had just joined the procession of the image-carrying women, the *rezador* and his acolytes, and the group dedicated to the annual service, when the *Fariseos* appeared on the scene to burlesque the devout and "play" around them. These masked men teased one another; they fell over dogs and rolled in the dust; they displayed mock fear; they set a doll on the ground to venerate it as a saint; and they simulated eating and drinking the excreta they would pretend to catch in their wooden machete from the body of passing burro or horse or man or woman, even of one kneeling in prayer. This last diversion was a variant on the filth eating and drinking practices of the Pueblo clowns, otherwise every new trick or bedevilment that was enacted on the outskirts of that religious procession was one I had seen in our Southwest. The *Fariseos* behaved just as would the *Koyemshi* were there Catholic processionalists at Zúñi which the *Koyemshi* had to attend. I gasped in amazement, inwardly—the dust was smothering.

Before Dr Beals gives a fuller account of the behavior of the *Fariseos* or *Chapaiyeka* and of their organization let us survey briefly what we know of the clowning groups of the Pueblos,<sup>1</sup> as a convenience for compar-

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<sup>1</sup> Principal sources are:

Hopi: A. M. Stephen, *Hopi Journal* (See Index), CU-Ca (in press); *Hopi Tales*, JAFL 42: 14, 15, 19-21, 1929. M. Titiev, *Hopi of Third Mesa* (in ms.).

Zúñi: R. L. Bunzel, *Zúñi Katchinas*, BAE-R 47: 935-41, 946-58, 1932. E. C. Parsons,

son, possibly as a convenience in itself. The groups vary considerably in each Pueblo tribe.

#### PUEBLO CLOWNS (By ECP)

Among the Hopi of First and Third Mesas and the Tewa of First Mesa—we are not well informed about Second Mesa<sup>2</sup>—there are four distinct clown groups, five if we include the Nata'shka and Cha'vaiyo kachinas—the Chù'kü'wimkya<sup>3</sup> who wear their hair like the young girls, bunched on each side, or who wear a wig, and paint black around eyes and mouth or red stripes across the 'face (these reddened ones with red stained rabbit fur at their ears are called Hopi Chù'kü'wimkya); the Pai'yakyamü or Koyala (Kossa) of the immigrant Tewa, who paint in black and white bands with black circles around mouth and eyes and wear their hair in two vertical pokes or horns bound with corn husk; the Koyi'msi (also called Ta'chûkti) who wear a knobby cotton mask smeared with red clay with turkey feathers tied to the knobs, and a shabby black woolen loin cloth, hardly a kilt, over their reddened body; and the Pi'ptüyakyamü or "ar-

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Notes on Zuñi, AAA-M 4: 153, 172, 173, 229-37, 1917, The Zuñi Ádoshlē and Suukē, AA 18: 338-47, 1916; Winter and Summer Dance Series in Zuñi in 1918, UC-PAAE 17, No. 3: 179' 181, 182, 184, 189, 191, 193, 194, 1922.

Keres: E. C. Parsons, Notes on Ceremonialism at Laguna, AMNH-AP 19, Pt. 4: 101, 103, 114, 115, 123, 124, 1920. F. Boas, Keresan Texts, AES-P 8: 292-95, 1928. E. S. Goldfrank, Notes on Two Pueblo Feasts, AA 25: 189-91, 1923; The Social and Ceremonial Organization of Cochiti, AAA-M 33: 42-47, 52-55, 89-91, 93, 94, 110, 1927. Noel Dumarest, Notes on Cochiti, New Mexico, AAA-M 6, No. 3: 164, 165, 185, 186, 190-92, figs. 1, 2, 1919. L. A. White, The Acoma Indians, BAE-R 47: 51, 71 n. 57, 72-74, 79, 97-101, pl. 10, 1932, The Pueblo of San Felipe, AAA-M 38: 17, 18, 24, 39, 41, 1932, The Pueblo of Santo Domingo, AAA-M 43 (in press). M. C. Stevenson, The Sia, BAE-R 11: 33, 71, 112-16, 130, 1889-1890.

Jemez: E. C. Parsons, The Pueblo of Jemez (New Haven), 1925, pp. 63, 64, 76, 83-87, 91-93, 94, 96-100, 110.

Tewa: E. C. Parsons, The Social Organization of the Tewa of New Mexico, AAA-M 36: 125-32, 182-84, 194, 195, 220, 221, 226, 227, 270-72, 1929.

Taos: E. C. Parsons, The Pueblo of Taos (in ms.).

Isleta: E. C. Parsons, Isleta, New Mexico, BAE-R 47: 261-64, 317, 321-24, 333-36, 344, 345, 1932.

<sup>2</sup> We do know that Shuño'povi has the Chu'ku'wimkya and the Pi'ptüyakyamu mummers, for June 4, 1893, these groups visited First Mesa to play, using Chief kiva, the same kiva the similar groups of Walpi usually make use of (Stephen, 402-403). At Shipau'lovi, Fewkes describes the Chu'ku'wimkya as painted yellow, body and face, with two parallels of red across the face. They wear a wig of sheepskin (A Few Summer Ceremonials at the Tusayan Pueblos, 11).

<sup>3</sup> The Third Mesa picture of the clowns is in general similar to that of First Mesa but details and, in one case, nomenclature vary. I am giving these as of First Mesa. Curiously enough one type of clown, who is called Chu'ku'wimkya on First Mesa (striped yellow and black, wearing a sheepskin cape), on Third Mesa are called Pai'yakyamu.

rivals" who wear all kinds of grotesque masks and clothes or appear without masks, according to the rôles they are for the time being enacting. These Pi'ptuyakaymü are mummers who perform improvised farces or comedies at the kachina dances. The Pi'ptuyakyamü and Koyi'msi are without permanent organization (the Koyi'msi have a chief in whose house they may assemble); kiva members volunteer; they appear during dances or ceremonies which have been borrowed from Zuñi, the Koyi'msi being of course the Zuñi Koyemshi and the Pi'ptu probably carrying on the burlesque activities of the other Zuñi clown group, the Ne'wekwe. The Pai'yakyamu (Keresan: Paiyatyamu, youths) are the Kossa or Koshare of the Eastern Tewa or Keres. Formerly they had a permanent organization, a chieftaincy, and they are possessed of altar paraphernalia. They consider themselves the leaders and fathers of the kachina. The Chu'ku have a sort of indirect organization,<sup>4</sup> the parts may be taken by members of the Singers or of the Wu'wuchim societies, two of the four town groups into which every male Hopi is initiated. All Singers and Wu'wuchim function as clowns<sup>5</sup> in the joint ceremony of the initiation of the youths to the extent of singing obscene and taunting songs against the society women<sup>6</sup> and now and again smearing them with filth, to be in turn drenched with urine or foul water.<sup>7</sup> The Singers carry vulva shaped sticks. This quasi-relationship to the women's societies is found again between the clown groups and women's societies of Jemez (one of the two non-Hopi pueblos which are possessed of women's societies), only at Jemez the relationship is the more sober one of prayer-stick making; the clown groups make the prayer-sticks the women deposit. The Nata'shka are a group of kachinas who figure as bogeys to discipline the children in the Powamu ceremony.<sup>8</sup> Cha'vaiyo is a

<sup>4</sup> Formerly they had a ti'poni or chiefly fetich and inferably a chief (Stephen, 182) but even in Stephen's day this organization had lapsed.

<sup>5</sup> The Singers are also seen burlesquing a dance episode in the women's Mamzrau ceremony (E. C. Parsons, *The Hopi Wovochim Ceremony in 1920*, AA 25: 171, 1923). Singers and Wu'wuchimtu talk in a high falsetto and make jests when they distribute rabbits to certain houses (Stephen, 984).

<sup>6</sup> On Third Mesa only the Wu'wuchim society did this and only against the Mamzrau society women (Titiev).

<sup>7</sup> On one occasion three women were trapped and made to play clown with the men clowns. Their obscene humor was quite up to the men's (Stephen, 365 ff.). Hopi society women perform a dance burlesque of the men's war dance and many other burlesques.

<sup>8</sup> On third Mesa they may come out at other times, as do their homologues at Zuñi.

Among the Hopi there are several other kachina (more numerous on Third Mesa than on First Mesa) who play clown, presenting comic interludes in their sober kachina performances and playing with the regular clowns. Hehe'ya might be described as the Kachina clown.



slayer kachina who once lived with his offspring, the Nata'shka, in the San Francisco mountains.

Corresponding to the Nata'shka and Cha'vaiyo are the Zuñi Natashku, the Atoshle couple, and the more dreadful and less commonly impersonated Suyuki who are to be identified with the Hopi Suyuk and Natashku. Bogeys kachinas aside, we get a picture of Zuñi clowns which is quite different from the Hopi picture, not so much in behavior as in functions and organization. Among the Hopi the clowns do not cure; they have no distinctive weather ritual.<sup>9</sup> what permanent organization they once had has been allowed to lapse; they are little but comedians or attendants upon the kachina. But the Zuñi Koyemshi and Ne'wekwe are vital organizations closely integrated into the ceremonial life. The Koyemshi are ten men selected from society or kiva to serve for one year. After the lapse of a few years the same group may serve again. The Koyemshi make monthly prayer-stick offerings for moisture; they have to attend the summer kachina dances for rain; they "play" and perform rituals at the November ceremonial of Koko awia or Advent of the gods, generally known as Shalako, when their "retreat" is the longest observed by any of the ceremonial groups and concludes with exacting privations of speech, sleep, and food. Their masks are in the custody of one of the high priesthoods, the rain priesthood of the west. They make domiciliary visits to receive gifts of food in their fawnskin bag; at the close of Advent or Shalako each is given a great number of presents by his father's clanspeople. The Koyemshi do not cure, but they have supernatural powers and are held in awe by all the townspeople. "They are the most feared and the most beloved of all Zuñi impersonations."<sup>10</sup>

The Zuñi Ne'wekwe are also possessed of black magic, but they are a regular curing society. Only a part of the society act as clowns. They have a ceremony of initiation, held in winter, and they are expected to attend the winter kachina dances. They are in charge of a set of grotesque kachina masks, the Hewahewa masks,<sup>11</sup> and when these are worn by a dance group a

<sup>9</sup> At Oraibi they are said to bring wind, formerly they performed a ceremony against wind, in March (Titiev). At Walpi they may be asked to bring rain (Stephen, 370). On First Mesa a dream of clowns being whipped by kachina is a sign of cold, a dream of clowns dancing is a sign of rain.

<sup>10</sup> R. L. Bunzel, Introduction to Zuñi Ceremonialism, BAE-R47. 521, 1929-1930.

<sup>11</sup> Of the making, wearing and care of grotesque or burlesque masks at Zuñi and other pueblos we have scant information, but it seems probable that they are not considered dangerous and so are lacking in taboo (See E. C. Parsons, Hopi and Zuñi Ceremonialism, AAA-M 39: 84, fn. 319, 1933.) This does not apply to the Zuñi Koyemshi masks; but then there is a false set of Koyemshi masks which are used at the less important dances, a practice applied to other potent kachina masks. At Santo Domingo there is a large group of kachina masks which, like

Ne'wekwe is leader. The farces and burlesques of the Ne'wekwe are improvised, whereas the games and buffoonery of the Koyemshi are for the most part ritualistic or stereotype. The chief of the Ne'wekwe has to make monthly prayer-stick offerings for moisture; without mask he impersonates the supernatural patron of the society in the dramatization of the Return of the Corn Maidens enacted at the close of Advent.

In appearance and behavior the Ne'wekwe are to be equated with the Koshare of the Eastern pueblos.<sup>12</sup> But the Koshare or Kossa of the Keres or Tewa do not cure.<sup>13</sup> They play the clown, they attend upon the kachina and upon Saint's day dancers, and in some pueblos they take charge of field work for the Town chief and of ritual hunts. The Koshare (and Kurena) of Cochiti have even been called managing societies.<sup>14</sup> The Kurena have often been referred to as a clowning society; they may alternate as managers with the Koshare and they have a close relationship with the kachina, but they do not clown.<sup>15</sup> The seasonal alternation of Koshare and Kurena<sup>16</sup> and the association of the two groups with the double kiva system of the Keres, the Koshare with Turquoise kiva and the Kurena with Squash kiva, would appear to fill what need of moiety expression the Eastern Keres have borrowed from their neighbors, the Tewa.

In myth the Tewa associate Kossa with both moieties, with both Summer People and Winter People, and the Kossa act as clowns and as scouts. Actually there is but a single Kossa organization and a single supernatural patron who is represented by a small anthropomorphic image of stone.

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the Hewahewa, are kept by the clown societies. They do not require the preliminary rite of emesis in order to be worn and they may be seen by white people. These kachina live in the south, at Gowawaima. One of them is called Rik'us, el Rico. Kachina masks from Mexico'

<sup>12</sup> See Stephen, 945, 947-48, for a comparison between Ne'wekwe who are visiting First Mesa, and the Singers

The Koyemshi appear in some of the Eastern pueblos, but merely as kachina dancers or scouts.

<sup>13</sup> Except in Laguna where they cure for lightning shock and possibly for other disasters or for disease. But the ceremonial life of Laguna is so disintegrated that various functions have had to be undertaken by makeshift groups. An analogous situation is found at Nambé where Santa Clara Kossa have been called upon in curing

<sup>14</sup> Goldfrank, Cochiti, 42-43.

<sup>15</sup> However I have included the Kurena in our comparative table because their activities are so close to the non-clowning activities of the clowning group.

The Kurena have been equated with the Shi'wannakwe society of Zuñi (E. C. Parsons, Census of the Shi'wannakwe Society of Zuñi, AA 21: 333-34 1919).

<sup>16</sup> At Santo Domingo, the Koshare hold their annual ceremony, also initiation, in February; the Quiraina, in September. At Laguna, "the Kurena lead the people back from the harvest," which is why at Jemez they are called Ice society.

Originally the image was of dough, a not insignificant detail in view of the dough images of the Aztecs.

The prototypes or supernatural patrons of the Zuñi Ne'wekwe and of the Keresan Koshare were created from human cuticle or from Corn Mother cuticle, i.e., from corn meal. The supernatural patrons of all the Pueblo clown groups are anthropomorphic. With one exception the groups have no relationship with the spirit animals, the animals of the curing and hunting societies and Rattlesnake. The Horned or Plumed serpent is a water snake and with him the clowns do have dealings. Koyi'msi figure in the Horned water serpent dramatization by the Hopi, and the Tewa Kossa perform ritual to control Avanyo, the sender of flood in the Rio Grande valley.

Membership in the Kossa or Koshare (Kurena) group is primarily through parental dedication in childhood, a sick infant or little boy will be "given to them." Trespass past or within an ash or meal line or circle, "their house," is another widespread means of recruiting, sometimes merely for the immediate ceremonial occasion. Dedication of sick boy babies is customary also at Taos in recruiting the Black Eyes.

The chieftaincy of the Taos Black Eyes belongs within one of the north side kivas and the membership is largely from the same kiva: but an infant whose membership in another kiva is already established may be given to the Black Eyes. The dedication is made on either of the two ceremonial occasions at which Black Eyes "come out," on Saint Geronimo's day, the patron saint's day, when the Black Eyes climb the pole they have brought in and erected,<sup>17</sup> and on the day the Deer dance is given, Christmas or Kings' day. At the Deer dance throughout the morning Black Eyes are running from house to house collecting food presents: in their courses outside they shout and gesture, they also gather together to sing. They may throw one of their men into the river where the ice is thin or they may dramatize a deer hunt, stalking a Black Eye wearing deerhide and horns, killing him and loading him on the back of another Black Eye. At the afternoon dance they burlesque the dancers, even the sacred Deer Mothers, and they seize the smaller deer impersonations, the little boys, throw them across their shoulders and try to reach their kiva before being caught by the lookers-on. They also give small bits of venison to the women dancers of the Saint's day dance as they stand around on the edge of the Deer dance. During this day no war captains are in evidence; the Black Eyes police.

<sup>17</sup> Pole climbing is practiced by the Koshare of the Tewan pueblo of San Ildefonso; it has not been noted in the other eastern pueblos and it does not figure in the ritual games of the western pueblos.

The Black Eyes paint in black and white bands like the Koshare, but wear their hair tied up each side, something like the Hopi Chū'kü. Formerly the organization was possessed of two masks, perhaps more, which are kept in a cave, in charge of the family that was then and still is in charge of the Turtle dance, a maskless kachina dance. The masks are of deer hide with two erect points, probably with little decoration. These are the only masks known to the Taos people. It seems probable that they were once worn as clown masks in connection with the Turtle dance, possibly by that one of the paramount chiefs who was in charge of masks and dance. The masks are sacrosanct and the town was racked when one of them was "lost."

The Isletans have similar masks which are worn by the six Te'en or Grandfathers, three Black Eyes, three Red Eyes, representing each moiety and including the Town chief. The Grandfathers are a permanent group that comes out to play at maskless kachina dances. We may note that the Town chiefs of San Ildefonso are Kossa and that the chief of the sometime winter moiety of the Tewa of First Mesa was chief of the Kossa or Koyala. Prominent townsmen in various pueblos have been observed playing Kossa or Koshare. Except at Isleta this would seem to be not a set political function, merely a trend, possibly based on the part once played by the clown groups in war, possibly because the politically minded are quick to take advantage of the fear always inspired by the clowns as a means of social control.

The obscene behavior of the clowns may be considered as a war trait, particularly their formal obscenity towards women and their eating or drinking of filth and stereotype gluttony. Also their backward speech, saying the contrary of what they mean. Backward speech, eating or drinking in excess or things ordinarily repugnant, and playing "practical jokes" on old women, etc., were all items in the foolhardy behavior of certain Plains warrior societies. One of the war chiefs of Isleta is characterized by backward speech, and the warrior among the Zuñi Koyemshi does the reverse of what would be expected of a war chief. Ducking in water is another trait common to the clowns and the military societies of the Plains.<sup>18</sup>

The Pueblo war groups or chieftaincies have disintegrated more than any other part of the social organization, due to the passing of war. But there are still positive relics or memories in some pueblos of the sometime war or associated war activities of the clowns. The K'ashale of Acoma, now almost extinct, were managers of the Scalp ceremony and the Gumeyoichi today act as scouts in the dramatization of the fight with the kachina. The

<sup>18</sup> R. H. Lowie, *The Tobacco Society of the Crow Indians*, AMNH-AP 21: 113, 1919, *Military Societies of the Crow Indians*, AMNH-AP 11: 205, 1913.

Kashare of Laguna helped prepare the scalp, they attended on the scalp-takers and they performed a general exorcism in the Scalp dance by shooting off arrows after the people spat into their quivers. In the dance of the warriors the Kashare were in charge of one kiva, the Kurena in charge of the other, and they led the dance groups.<sup>19</sup> The extinct Red Eyes of Taos had the function of getting people out to take part in the Scalp dance. Hopi and Zuñi clowns have sometimes killed the dogs they chased, the Zuñi clowns referring to their victims as Navaho. The scalps of Isleta are kept in the ceremonial houses of the moiety chiefs whose organizations furnish the Grandfathers and the impromptu K'apyo who play clown parts in the Spruce dance, the maskless kachina dance borrowed from Zuñi. We may note that these K'apyo sing improvised satirical songs against townspeople.

The term K'apyo appears to be related to Chapio, Tsabiyo, the term applied by the Keres to a mask which comes out on Saint's days and is reputed to come from the south. At Laguna in burlesquing a Mexican, Chapio may ride a horse; he carries whip or lariat; on his mask is painted a cross.<sup>20</sup> The Tsabiyo, or Abuelos, grandfathers, come out with the Matachina dancers at Cochiti and at San Juan. At San Juan most of their by-play is with a little boy who wears horns and is called Torito, little bull. Abuelo leads Torito by a cord and finally kills and quarters him. Abuelo wears a hide mask,<sup>21</sup> painted with American designs or words. He carries a whip. Two Abuelos come out in the Matachina given at Alcalde, a Mexican settlement three miles distant. They play just like the Abuelos of San Juan. This Matachina mask does not speak, he carries on purely in pantomime. There is a burlesque of the Matachina at Santo Domingo including a burlesque bull and bull fighter, which is probably performed by the Chapios, although Dumarest does not so state.<sup>22</sup> The Tewa and the Tanoans of Isleta and Taos apply the same term to a mountain dwelling cannibal giant who preyed on people, particularly on children. The Cha'vaiyo and

<sup>19</sup> Boas, 293, 294.

<sup>20</sup> Goldfrank, *Two Pueblo Feasts*, 189-91.

<sup>21</sup> Similar to the Abuelo mask figured at Cochiti (Dumarest, pl. VII).

<sup>22</sup> Sundaro (Sp., *Soldado*) is an elaborate annual dramatization of the arrival of the Spaniards which includes dances, songs, a bull fight and horse masks called Santiago and San Geronimo. Sundaro is comparable with the bull performance at the fiesta of Porcingula at Jemez and with the comedies of the Hopi Pi'ptuyakyani. Sundaro is well integrated into the whole ceremonial life, but the clown societies appear to have no connection with it. Compare a saint's day celebration in the Aztec Huasteca in which appear Santiago's hobby horse, a bull mask, los Negros or two masked clowns, and los Viejos, an old couple in masks (F. Starr, *Notes upon the Ethnography of Southern Mexico*, Proc. Davenport Acad. Sciences 9: 70-72, 1901-1903).

Nata'shka kachina of the Hopi, impersonations of the early monsters, and the Zuñi Atoshle (grandfather) and Nata'shku masks are related in function to those eastern impersonations. All are child bogeys or disciplinarians<sup>23</sup> rather than clowns, but in some cases their behavior corresponds to that of the clowns. (In Table 1 are given details necessarily omitted in the foregoing survey.)

In general the clowns have a punitive and policing function in ceremonial matters and through their license in speech and song a somewhat similar function in domestic matters, ridicule being a strong weapon among the Pueblos. Probably most Pueblos would rather be ducked than mocked. One of the foremost supernatural sanctions at Zuñi is drought; if you break a taboo, rain will not fall on your field. The flood-sending water serpent in the Rio Grande valley has a punitive character. So it is quite consistent that the clowns should be associated with the water serpent and with the rain-sending and crop-bringing kachina. But the clown groups have direct weather-control and fertility functions, they themselves impersonate kachina or other supernaturals who live in springs or lakes. As scouts or war dance assistants the clowns have war functions. In short, through their police power, their magical power and their license in conduct, all fear-inspiring characters, social regulation is an outstanding function of the clown groups. Leadership for the kachina, including general attendance, is another important function. Last and not least, today certainly, the clowns amuse the people; they clown in our modern sense of the word. They attract more attention and arouse more interest than any other public performers. Dances and dramatizations are often held in a pueblo with few lookers-on, but almost everybody comes out to watch and enjoy the clowns. Their practical jokes or "horse-play" and their "personalities" and indecencies violate all ordinary rules of conduct in communities where casual bodily contacts are uncommon, where people are timid about gossiping, and where sexual expression in public is very restrained. The appeal to sexual emotion made by the clowns might be inferred from the myths about them—their supernatural patrons, Taiowa and Paiyetemu, are handsome seducers, "their father" Koyemshi is another Adam, his sister-wife another Eve; but clown play, obscene though it may appear, is so ritualistic, so stereotype, that the anthropologist has usually interpreted it as phallic magic. It was not until I found Stephen's account of the Hopi burlesques that I

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<sup>23</sup> A striking case of discipline occurred on First Mesa in 1924. Some children who had just been whipped by the kachina were telling the younger children about it, so Cha'bio came out, dragging a man by a rope around his neck to demonstrate how an indiscreet child might be made off with (E. C. Parsons, *The Ceremonial Calendar at Tewa*, AA 28: 227 n. 45, 1926).

realized that here was no merely phallic representation like the dignified phallic kachina of Zuñi called Olowishkya, but a deliberate intention to give as outright a representation of sex as possible, *for fun*. Phallic magic is involved but the sex play or pantomime is probably also a stimulation, not to direct license, as the friars and the school teachers have ever thought, but to sex consciousness of a general sort, in groups where sex expression is very limited and sexual emotion is never openly manifested.<sup>24</sup> Another form of emotional release through clown comedy or satire are the take-offs on other tribes or races—Navaho, Mexicans, Americans. It must be quite as gratifying to the Pueblo to ridicule the Navaho shaman, the Mexican bull fighter or the American tourist as it is for us to ridicule the obtuse Britisher, the French sport or the Negro.

#### MAYO-YAQUI CLOWNS (By RLB)

The most striking external manifestation of the life of the Indian communities of southern Sonora is the appearance of the clowns during Lent. Wearing grotesque masks and performing ridiculous antics, they run in small groups from house to house through the fields and woods, begging for food, money, or even a few gay flowers to adorn their already brightly painted masks. The many Mexicans who live among them, however, are unaware of the ramifications and significances of this behavior.

These Sonoran clowns are part of a complex organization centering about extensive ceremonies culminating in a week-long dramatization of the life and death of Christ. Essentially the same, Mayo and Yaqui clowns yet differ in costume and especially in organization. Probably the less complex organization of the Mayo is largely due to greater cultural disintegration.

In Spanish discourse both peoples refer to the clowns as *Fariseos* (Pharisees) or, at times, *Diablos* (devils). On certain occasions the Mayo call them *Soldado del Pilato* (soldiers of Pilate). The Yaqui call them natively Chapai-yeka (yeka, nose; chapai, no etymology), a word applied by the Mayo to the mask only.

*Organization*<sup>25</sup> Membership is recruited through vows as a result of

<sup>24</sup> This interpretation has been well expressed by Dr Bunzel in connection with Zuñi loining: "Undoubtedly the great delight in the antics of the clowns springs from the sense of release in vicarious participations in the forbidden" (Bunzel, *Introduction to Zuñi Ceremonialism*, 521, n. 59).

<sup>25</sup> Space limitations forbid more than the briefest résumé of features most significant for comparative purposes. It is hoped to publish a complete account as part of a general study of the two peoples.

TABLE 1. TRAITS OF PUEBLO CLOWNS

ORGANIZATION	<i>Hopi (First Mesa)</i>	<i>Zuni</i>	<i>Keres</i>	<i>Tewa</i>	<i>Iones</i>	<i>Islela</i>	<i>Taos</i>
	Ch'u'ku'wimkya: all members of Singers and Wöwöchim societies may perform; Singers' chief acting as their chief; recruited by trapping; temporary performers from any kiva; disguised upon kept in maternal house of Kachina clan. (Third Mesa: no relation with Singers and Wöwöchimtu).	Ne'wekwe: volunteers from Ne'wekwe curing society whose chief should be of the Sandhill crane clan.	Koshare: society membership recruited by dedication in infancy, by trespass, by convalescents, by dreaming (San Felipe, Santo Domingo); male and female members; associated with Flint society and Turquoise kiva; some temporary performers (Santo Domingo).	Kossa: society membership recruited by dedication and trespass; initiate and give names; female members; office continues after death.	Taho'sh: large, quasi moiety group, from which clowns are supplied; use Turquoise kiva; associated with women's societies.	Black Eyes recruited by ordinary dedication in childhood, also by convalescent's parents; most members of the society belong in Kinte kiva; chief of society must belong to the Water-dipping kiva group; also initiates by kidnapping. K'ap'yo, six appointed temporarily from each moiety for harvest dance by maskless Kachina.	Black Eyes recruited by ordinary dedication in childhood, also by convalescent's parents; most members of the society belong in Kinte kiva; chief of society must belong to the Water-dipping kiva group; also initiates by kidnapping. K'ap'yo, six appointed temporarily from each moiety for harvest dance by maskless Kachina.
	Koyala or Kossa (Pa'i'yakyamu); recruited by trapping; their chief, one of the two kiva (or moiety) chiefs of Tewa.		Kurena: society membership recruited by dedication in infancy, by trespass, by convalescents; male and female members; associated with Shikame society and Squash kiva; some temporary performers.	Kwirana: recruited by dedication; female members; Keresan affiliations; lapsing.	Ts'un'ta taho'sh, also called Ice society; large, quasi moiety group from which clowns are supplied; use Squash kiva.		Phulenoma: red painted or scalp-connected people, recruited by ordinary dedication in childhood or appointed by War chiefs; extinct.
	Koyi'msi (Ta'chökt'i): indefinite number of volunteers from kiva dance groups; once assembled in Chief kiva, later in the house of their chief; masks kept in Horn kiva or Badger clan house.	Koyemshi: ten impersonators annually from society or kiva membership, their chief appointed by rain priests and himself choosing the other nine, appointees selected so as to represent all the clans.	Gumeyoish (G'oma'iowish): from kiva dance groups; masks kept by Badger clan chief (Laguna); from two kiva groups, indefinite number of impersonations (Acoma).		Gumeyoishi, kachina impersonations, one group associated with Snake society, another group with Arrowhead (Flint) and Fire societies.	Pachu'an, funny men; appointed by moiety chiefs.	
	Pi'ptuka: grotesque impersonations by volunteers from kiva dance groups.					Chapiude.	Chapaluna.
	Nata'shka (Suyuku). kachina impersonations organized as a family; impersonators from kiva dance group; paraphernalia kept in maternal house of Snake clan. Cha'vaisy: kachina impersonation.	Nataashku (Suuke): kachina impersonations (rarely appearing). Atoshle (grandfather): kachina impersonations, the couple, old man and old woman, supplied from membership of each kiva.	Chapio (Ch'api'u).	Tsahiyo or grandfathers (Tewa, tete; Sp., abuelos), two impersonations, grandfather and grandmother, always by same men; one from Winter moiety, one from Summer moiety (San Juan).			
OUTFIT	Chü'kdi: hair bunched on sides or coiled over forehead, with corn husk, or wig; black circles around eyes and mouth or red stripes on face; body daubed with yellow or banded with white or smeared grey; vulva painted in red on arms; red stained rabbit fur in ears; wear blanket rolled around loins or across right shoulder; standard of dried mudhen.	Ne'wekwe: cap smeared with grey mud and trimmed with corn husk on side and on top and with stiff or downy eagle feathers, or hair in single poke on top; black circles around eyes and mouth; chief, red stripes on face; body smeared with gray mud from society's spring (sun picture outlined on back), or tattered American clothes; moccasins; black neck cord; use drum, rhombus, baton. The general society is possessed of altar and masks for curing and initiation.	Koshare: hair as husk-bound horns or under horned cap; body and face painted with black and white rings (Laguna, bluish clay); hair painted white (Santo Domingo); black kilt; Jerusalem berry necklace; garlands of yellow blossoms; bandoler and anklets of rabbit fur (San Felipe, Santo Domingo); carry turtle shell rattle or hoof rattle, also painted crook stick with turkey feathers; "Sun youth" Kashiare (Acoma) wear old, grotesque clothes; possessed of altar and mask for initiation, also of flute (Laguna).	Kossa: hair as husk-bound horns or under horned cap, horns called "mist;" body and face painted with black (or yellow) and white rings; breech cloth, neckerchief and leggings of <i>manta</i> cloth; food handoler; carry stone image of supernatural patron (once the image was in dough), eagle feathers, rattle; possessed of altar: medicine bowl, meal basket, meal "road."	Tabo'sh: hair banging, with corn husk in forelock or hair painted white or yellow, in husk-bound poke, with wreath; face streaked with white under eyes and across lips and cheeks, body, ringed with white and yellow (one case, feather-brown on face), shabby cloth clout; garlands of clematis and yellow flowers around shoulders, waist and ankles, or double bandoler of flowers; society possessed of two "mothers" or fetiches.	Grandfathers: masks of buckskin with long ears, painted white or yellow or red, buckskin coat and trousers; spruce collar, yucca blade whip; masks kept by moiety chiefs in their kivas, only moiety chiefs may put masks on Grandfathers. Black Eyes (moiety) use sparrow hawk feather, turtle shell rattle, leg rattle of water turtle; take backward. Red Eyes (moiety) use turkey feather and gourd rattle; leg rattle of land turtle.	Black Eyes: hair tied up either side of head, young girl's hair with corn husks, tops painted black and white, white paint on top of head also corn husk or wreath of dried yellow and orange, or hawk feathers in hair; dress, black around eyes, white bodies gray white and black on face, body black and white, trousers leggings; blanket, green or off-shabby moccasins or shoes without heels; possessed of masks of buffalo hide, flat face, erect ears or horns, kept in ritual cave.
	Koyala: hair as husk-bound horns or in belted coil; body and face painted with black and white rings; black kilt; sheep hoofs tied around ankle in front; bandoler for "hunch;" possessed of altar properties (painted cotton blanket, medicine-water jar, crook prayer-stick); mudhen standard.		Kurena: bandsome shirt, woven belt, trousers, or body painted white, or half white, half yellow, with black crescents (Sia); with black breech clout and black cloth under knees; face painted with vertical lines of black and red, under eyes lines represent tears; sparrowhawk feathers in hair, also downy eagle; carry painted crook stick with sparrowhawk feathers, also stick with bells and leafy wands, or "whips," possessed of altar and mask for initiation, also of flute (Laguna), of medicine for conception by women (Sia).	Kwirana: hair in single poke, with corn husk tassel; body and face painted white; possessed of fetish stone images.	Ts'un'ta tabo'sh: hair parti-colored, yellow and blue, wrapped in two pokes, with downy eagle feathers and sparrowhawk feathers; face and body ringed blue and white or yellow (white) and black, loin cloth of Hopi white embroidered cloth; necklace and body wreath of clematis, or necklace of Jerusalem berries; carry rattle-stick of hoofs, spruce; chiefs wear white cotton shirt and trousers, woven belt; <i>banda</i> , moccasins; rattle of oliveella shells wrapped around corncoak; society possessed of a "mother" or fetish.	Phulenoma: painted red.	
	Koyi'msi: knobby cotton mask, painted pink, with turkey feathers to knobs, cottonwool and seeds in knobs; two or three masks with snout-like duckbill; body pink; neckerchief and kilt of <i>manta</i> cloth; barefoot; fawnskin bag; gourd rattle, white or pink with rings or crosses in black; rhombus.	Koyemshi: knobby cotton mask, painted pink, with turkey feathers to knobs; cottonwool, seeds, and soil from people's footprints in knobs; body pink; neckerchief and kilt of <i>manta</i> cloth; seed packets under neckerchief; barefoot; depililated and penis bound; fawnskin bag; eagle plumes in hand; use rhombus and sexually exciting drum, containing black butterfly.	Gumeyoish: knobby cotton mask, painted pink, nose zigzag, feathers on top; seeds in knobs; zigzags painted on arms and legs; body red or white (Acoma); neckerchief and woman-like dress of <i>manta</i> cloth.		Gumeyoishi: mask of Zuni Koyemshi type, black kilt, black neckerchief.		
	Pi'ptu: improvised mask or maskless; improvised costume. Nata'shka: kachina mask (snout and horns) and costume; carry burden basket and knife; knife, arms and hands of Soyok maid smeared with blood. Cha'vaisy: long white horsehair wig sprinkled over mask; goggles eyes and snout; forearms and legs, black spotted white; rabbit rug mantle, black cloth flap as breech cloth, red buckskin pouch and bandoler; turtle rattle right leg, blue yarn left leg; saw used as sabre, whip.	Nataashku: mask pink with white spots, huge snout, on top "great feather" of bow priests, blue horns; body pink with clay from sacred lake; buckskin mantle; carries bow and arrow and spruce. Atoshle: hair, black or white, falling over mask, white spotted black or black spotted white, goggles eyes, tusks; coyote fur collar; deer skin around loins; lion skin mantle; carries large knife, bow and arrows, eagle feathers; old woman in regulation woman's dress; rabbit fur collar; carries basket, twig brush, eagle feathers and crook.	Chapio: white cross on forehead of black mask, black tab from nose, on top, tufts of sheepskin; khaki trousers, leggings, dark shirt, white neckerchief; whip or lariat; burlesque mask, black with white whiskers and fur wig (Laguna); hide mask, with flaps for nose and ears (Cochiti).	Tsahiyo: black wig; flat-faced goatskin mask with protuberant nose, black with white ears or white with red ears, red diagonal lines across cheeks; mica earrings; fox fur collar, spruce twigs at back; buckskin coat and trousers, cowhide kilt; (in San Juan Matachina, goatskin mask with nose and ear flaps, fringed seam on top and at back, painted with horse, star, English words; ordinary clothes and shoes); whip with thong or yucca blade whip.			Chapiude: tall or giant mountain spirit, wearing little bells.
BEHAVIOR AND ORIGIN MYTH	Chü'kdi: come in over house tops; never appear until afternoon; dance sidling; assume squatting posture; race or play with kachina; severely whipped by kachina; drenched by kachina or by women; sprinkle ashes and peer as if seeing kachina coming; give kachina prayer-feathers and cast meal on them; hang bandolers to spruce in court; food given them in their ash outline horse by clanswomen (by paternal "aunts," Third Mesa); "I pick you to go to the court to eat!" is the invitation to play clown (Third Mesa); drink urine; eat gluttonously; show fear; present burlesques; use stuffed animals, also live ones; will tease, torture and kill dogs; simulate copulation with women, men, animals, using mock organs; play ritual games. Patron: (Wöwöchim), Sun youth.	Ne'wekwe: come out at winter kachina dances; present burlesques; talk backwards; chase dogs; eat and drink filth; use obscene gestures; break all rules of conduct; sprinkled with sacred meal; give away seed corn. Prototype created from cuticle of members of Shi'wannakwe society; called Sun youth; played flute.	Koshare: come out at kachina and saint's day dances, also at war dances (Acoma, Laguna); collect food in domiciliary visits; at dance descend kiva ladder head foremost (Santa Ana); in charge of Santiago "horse," of tree and squirrel in court; make circuits to announce work for Town chief and hunts; initiation dance; eat and drink dirt; head washed by woman of father's clan (Acoma); supernatural patron appears in mask at initiations; sing Emergence song in independent circuits. Patron or prototype created from cuticle of Corn mother, rainbow made for him to play on; associated with Sun. In myth, they learn jugglery; kill witch doctor and throw body into lake. Prototype lives in east or northeast.	Kossa: come out to "play" at dances (the society also presents dances after retreats or initiations); present burlesques of whites and Mexicans and of Catholic rituals; collect food in domiciliary visits, going on house tops; may consecrate chickens; asperse; sprinkle meal and pollen and ashes; sprinkle ashes and peer under hand as if seeing kachina coming; associated with a spring.	Tabo'sh: hoot and chatter, sing as they dance; join in line with other dancers; bunch together and back to back rub against each other, as if imitating animals; eat in the open, gluttonously, of food given them; meal besprinkled; appropriate spruce trees set up in court, spread blanket for notched stick players. make dancers run, wrangle over presents with children and women, come out at San Diego fiesta and at dances after rain retreats of the societies.	Grandfathers: first time out after initiation have to fetch from mountain spruce for collar and yucca for whip, may not speak; give permission to catch turtles; come out to play at maskless kachina dances, in charge of rabbit hunt after kachina dance; little girls "killed" (in women's court) by moiety chiefs to fetch water, wash heads, etc.	Black Eyes: come out to play in Deer dance, and on saint's day when they climb the pole which they have brought in they shoot at sheep, etc. on top of pole, make loud cry if the Deer dance is on morning of their dance, set out barrels, recover effects of it at dance, leave barrels with a fetishist dancer or woman; the man, or splash with urine; retreat (in speech, talking to one or funny; holler or chatter in high pitched voice, use of white face and arrows in Deer dance); burlesque Deer hunt and talks; capture little deer impersonators; give bits of raw deer meat to dancers; prototypes at Emergence taught people to eat venison.
	Koyala: never appear until afternoon; come in over house tops; give kachina prayer-feathers and prayer-meal; whipped by kachina; present burlesques; use stuffed animals (mudhen, prairie dogs), also live ones; wooden doll as their maiden; race with kachina; carry each other on back; eat a root which enables them to eat anything in any quantity, without harm; drink urine; gluttonous; simulate copulation. Patrons: twins through solar impregnation; patrons distributed apparel and masks to kachina.		Kurena: make circuits to announce work for Town chief and hunts; supernatural patron appears in mask at initiations; initiation dance; sing Emergence song in independent circuits. Patron lives in east or northeast; made ladder for people at the Emergence; associated with Moon (Sia).	Kwirana: come out to "play" at dances; associated with a spring (at Cochiti).	Ts'un'ta tabo'sh. Saint Porcigula festa, praying dance step, much gesticulation, peer under hand; chiefs make independent circuits with song), meal besprinkled, given food, but do not eat in the open; talk backwards; present burlesques.	Phulenoma: used red paint in offerings of pollen and feathers to the Night People, the Stars (Moon); danced with warriors in scalp dance, dancing very hard; make others dance around scalp pole, ducked shirkers and made them dance all day unless ransomed with food.	
	Koyi'msi: sing and talk Zuni; make Zuni prayer-sticks; fetch wood in ceremony; play set games together and with townspeople; come out in certain kachina dances; mark time with kachina dancers; dance in with kachina; may dance backward; sprinkled with prayer-meal. Zuni incest myth; wear woman's dress in punishment.	Koyemshi: out at kachina dances, obligatorily in summer; chatter in high pitched voice; express mock fear; make domiciliary begging trips; meal besprinkled; doused with water by women from house tops; observe retreats and ritual continence; for year-long ceremonial service paid by paternal clan; give away seed corn; accompany Atoshle to throw boy into river; possessed of magical sanctions; any one touching Koyemshi with paint on will go crazy; inspire fear in all; dangerous; personal satire; obscene speech; practice jugglery; play set games together and with townspeople; inverse conduct notable in their "warrior."	Gumeyoish: appear as kachina side dancers (Acoma); attend kachina initiation, frightening children, calling out about the blood from the whipping, supply medicine after the whipping; give war cry, in ceremony of Fight with the kachina, and throw rocks.		Gumeyoishi: walk single file, singing; inspire fear; make jokes (Snake society); out at races and (y) at cures, not at dances (Arrowhead and Fire societies).		
	Pi'ptuka: present farces, comedies and burlesques, at kachina dances; play with clowns, dog, sing satires.					Pachu'an: fetch spruce from mountains for maskless kachina dances when they visit; sing satiric, teasing songs, perform burlesques or caricatures; drink absintees; make people encountered dance or run, "play" with Grandfathers; in charge of rabbit hunt after maskless kachina dance.	
	Nata'shka: Soyok woman in group so called from hoot—soyoko-u-u-u pay domiciliary visits, frighten the children; given food, pretend to cut off head of adult. Cha'vaisy: plays with clowns, offered poor food but demands and gets good food, lays on with saw and whip; inspires fear, hoots; "Look for him in the fireplace!" says a woman to a naughty child (Tewa). Before he was killed by the Twins was a mountain cave-dwelling monster, preying on children and people generally; wore mail of arrowheads and shell jingles, son of the Sun; Haha'yi woman kachina, his wife, Nata'shka, their offspring.	Nataashku: after winter solstice visits houses containing children, to ask for meat. Suuke: said to carry off children in their baskets; prey on hunters; live in mesa; protect peach orchards against child raiders.	Chapio: imitate dancers; out with Matachina (Cochiti); keep back lookers-on; clear way in procession, leading it; mock fighting; tear off clothes; tumble into mud ponds; climb trees and break down branches; call each other compadre; gesture obscenely.	Tsahiyo: come out at maskless kachina dance (at San Juan); play with bull impersonation at Matachina, killing and slaughtering bull; violet dancers; in jest whip the "old men;" swinging gait; listless, staid conduct; call in falsetto; at Christmastide pay domiciliary visits and given food for their sacks, make young people come out to dance unless given food; has ears in the chimney and mothers may knock on it to call him; associated with snow fall, people say, "Tsahiyo is under the snow, he won't come;" lives in mesa cave.		Chapiude: lives in caves in western mesa; associated with kachina; used to steal and eat children, and children were hidden from him when his bells announced his return.	Chapaluna: two impersonations formerly made domiciliary visits at Christmas time, dancing around with the little boy of the house, younger children would cry and hide behind parents, who pulled food to visitors not to scare the children, did not speak; made such of the cross and people prayed to them; parents might say "Phulenoma, mountain Tsahiyo, is under the snow, he won't come" or "He is bringing deer for Christmas;" hunters ask him for deer, but when they see his tracks they hide from him.
FUNCTION	Ch'u'ku: ceremonial drama with kachina, guardianship of grotesque masks, popular amusement, sexual release. Koyala: consider themselves leaders and fathers of kachina, as were their supernatural patrons; popular amusement.	Ne'wekwe: supply kachina leaders and choirs; guardianship of grotesque masks (Hewahewah); burlesque; satire on individuals and social conditions, one of the groups to supply Koyemshi impersonators; curing by society at large; black magic; sometimes against one another, chief supposed to die prematurely, from black magic.	Koshare: supply kachina leaders and fathers; attendance on kachina, serving them as scouts; exorcism in scalp dance (Laguna); managers in scalp ceremony (Acoma); lead one kiva dance group in war dance (Laguna); out at saint's day dance; management of field of Town chief, of communal rabbit hunt, of Turquoise kiva; burlesque; popular amusement; satire against other peoples; black magic.	Kossa: attendance on kachina; serving kachina as scouts, also as leaders; out at Deer dance and saint's day dances; rain-making; pray to Horned water serpent, to control water of river, also to Fire god; pray for weather, child increase; cure; burlesque; popular amusement.	Tabo'sh: attendance on kachina, saint's day and other dances, serving as leaders, and praying; "play," dance, sing and pray in women's harvest dance; rain making (retreat and ceremony), order communal hunt; burlesque.	Grandfathers: managers for maskless kachina dance, peliding and ordering clean-up of town and wood to kivas. K'ap'yo: managers for maskless kachina dance in autumn, also hunt managers, impersonation of supernaturals.	Black Eyes: impersonators for Deer dance; possibly associated with racing, cure mask made dancers. Phulenoma: managers for scalp dance, possibly associated with racing.
	Koyi'msi: attendance on kachina, in Shalako and other dances; impersonation of supernaturals; dramatization in Water serpent ceremony, rain-making associated with their spirit patron, stereotype comedy and games. Pi'ptu: farce for popular amusement; satire against other peoples.	Koyemshi: attendance on kachina, impersonation of supernaturals; rain-making (offer prayer sticks throughout year and masks kept by rain-priesthood), burlesque of kachina; stereotype comedy and games.	Kurena: supply kachina leaders and fathers; lead one kiva dance group in war dance (Laguna); management of field of Town chief, of communal rabbit hunt, of Squash kiva.	Kwirana: dance attendance.	Ts'un'ta tabo'sh: attendance on kachina and saint's day dances serving as leaders, and praying; summon dancers, Saint Porcigula festa; rain-making (retreat and ceremony); burlesque of Pueblo and Catholic ceremonials.		
	Nata'shka: discipline for children; ceremonial drama; impersonation of supernaturals. Cha'vaisy: ceremonial drama, impersonation of supernatural; bogey for children; together with other kachina, disciplinarian for adults (Third Mesa).	Atoshle: discipline for children, sergeant for absentees from society meetings; impersonation of supernaturals.	Chapio: burlesque; police for dancers; bogey for children.	Tsahiyo: burlesque; bogey for children.	Gumeyoishi: impersonation of supernaturals; do not attend on kachina.	Chapiude: bogey for children.	Chapaluna: bogey for children, sends deer to hunters.





sickness of the candidate or near relative, to secure good crops, because of drought or pest, or for any other desired end. Infrequently children are dedicated by their parents. Some members are acquired temporarily through capture.

Membership is entirely male except for one woman member in the Yaqui village of Bican. Mayo clowns remain members for the duration of their vow, one or more years, usually three. Yaqui clowns are members for life, although not masking every year. Among the Mayo a newly pledged member goes to the Fariseo yaut (yaut, chief), who usually provides the goatskin for the mask. There is no initiation but if any of the Fariseos know a man has made the vow, he may be flogged by the chief if he fails to appear. He may not leave the group without permission even to secure food. The Yaqui have a simple initiation at a meeting beside the church the first Friday of Lent. Absent members are brought by force if necessary. Each new member sits in turn between two lines to be instructed in his duties. Later he is taken into the church by a godfather from among the clowns and a godmother from a woman's society.

Mayo clowns have an annually elected chief (Fariseo yaut) with extensive powers. Usually he is not a Fariseo and does not appear in costume. He carries a steel machete and braided rawhide whip. Theoretically he should be a "good" man; without vices, elderly, and capable of preserving order and obedience. His house is the meeting place of the group. A boy is usually selected as a drummer to accompany public appearances.

The Yaqui chief, *itom costumba yaut* (our customs chief), is a permanent or semi-permanent official theoretically elected from within the clown group. Actually he is chosen by the *maestro* or singer and prayer leader. He is unmasked, carries a painted wooden sword and no whip. His qualifications and functions are similar to those of the Mayo chiefs.

Among the Mayo, Pilate appears during Holy Week at appropriate times. His assistants are Fariseos, called during this week Pilate's soldiers. The position changes annually. The Yaqui Pilate serves for life and boys are dedicated to the office. Consequently two or more Pilates may appear at once. There is a body of assistants including Kaifas (Kaifax, the judge), sergeants, corporals, a drummer, and two or three flute players. Some of these are unmarried men of the clown society (who may not wear a mask), others serve because of vows or infant dedication. Pilate also commands a group of "soldiers" divided into infantry and cavalry, men who have vowed to serve three years. Their only connection with the clowns is indirect.

*Costume.* Outstanding are the masks; usually of goatskin, occasionally of peccary hide. Essentially they are squarish sacks with hair left for

moustache, beard, and sometimes on the face and back. Exaggerated features are painted on the front. A long thin nose of hide is sewn between the painted eyes, projecting straight forward. Large ovoid ears attached to the outer side and erect horns of hide, twelve inches or more long, complete the mask. Scroll designs cover the hairless portions and the Yaqui attach tufts of downy feathers to the tips of the horns and other parts. Yaqui masks diverge more from type than do Mayo masks. Some are "bull" masks, while two or three in each group wear "grandfather" masks with white hair all over except for indications of eyes, nose, and mouth.

Both Yaqui and Mayo wear blankets over their ordinary clothing, folded and wrapped about the body with supporting cords over the shoulders. The *Viejos* (grandfathers; old men) mentioned affect old United States army overcoats. About the waist is a wide leather belt with pendant bits of metal on strips of rawhide, imitating belts worn by Pascolas dancers. Some Yaqui belts of plaited leather with pendant deer hoofs are identical with those of the Deer dancer. The ankles and lower legs are wrapped with strings of cocoon rattles like those of both Pascolas and Deer dancers.

Regular accessories for the Mayo are a double pointed stick or lance and a wooden machete or sword, both painted red and green in wide bands. The Yaqui carry a wooden sword and a dagger. The Yaqui chief's wooden sword is broader bladed and is distinctly an emblem of authority, always picked up when a command is given or carried by a deputy executing orders. Extra paraphernalia includes dolls, often elaborately dressed as women, crudely carved human-like wooden figures, stuffed animals (burlesquing tobacco pouches of *fiesta* officials), improvised rattles imitating various kinds of dance rattles, prayer books, etc. With few exceptions all the equipment and costume except blankets and deer hoof belts is burned the morning of Easter Saturday.<sup>26</sup>

When not in use Mayo masks are kept at the house of the owner. Yaqui masks are kept in a room of the church: here also are kept two masks which are preserved from one year to the next.

*Behavior.* In most respects Yaqui and Mayo are identical. They may not speak when masked. Yaqui clowns (perhaps Mayo also) must carry the crucifix of a special rosary in their mouths<sup>27</sup> and pray continually while

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<sup>26</sup> Compare the burning of the effigy of Judas on *Subado de Gloria* in Spain and Mexico. At Jacaltenango, Guatemala, the effigy which is to be hanged wears a dance mask (O. La Farge and D. Byers *The Year Bearer's People*. Middle American Research Series, 3: 97, Tulane University, 1931) —ECP.

<sup>27</sup> Presumably because their impersonation is dangerous. The Pueblos carry an arrow

masked. The Mayo rosary protects clowns from malignant sky-dwelling spirits which cause body swellings. The Mayo mask or unmask in the brush or behind a building; if this is impossible, they turn their backs. Yaqui clowns mask lying down, supporting themselves on one elbow.

As the clowns beg and act as messengers while masked, they have many conventionalized signs. For example:

Clapping sticks together lengthwise while holding them before the body—it is over.

Finger tips to forehead, then bring forearm to horizontal—thanks.

Pass both hands down torso—I am hungry.

In taking a proffered gift, the left hand is used. The left hand “belongs to the devil.”<sup>23</sup> In general all possible actions are performed the reverse of normal.

Other activities of clownish nature include:

Imitating the various dancers in burlesque; reversing actions; taking fright at inconsequential things; running away; falling down, elaborate burlesques in pantomime; mock filth eating and drinking, etc.

There is much variation among individual clowns in the fervor and originality displayed in their horseplay.

Although no direct statement was made, sexual abstinence is effectively required of clowns as they may not leave the group at certain times and among the Yaqui may not even receive food directly from their wives or other women. Even small girls may not approach them. Clowns may do nothing “bad” during Lent; even bad language is banned. Violation of taboos causes the mask to stick permanently to the face and the ghosts may wander masked about the village after death.

*Functions.* Primarily clowns are guardians of the image of Christ and his special servitors during Lent. Clowns accompany the image whenever it is taken from church. They are messengers, wood cutters, and water carriers at all small household fiestas. Yaqui clowns urge people from their houses to church and endeavor to prevent departure before the ceremonies conclude. They enforce all taboos as to costume, behavior, etc., during ceremonies. At household fiestas they take part in an elaborate ceremony

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point under the tongue when exposed to witchcraft. At Zuñi kernels of black corn are also placed under the tongue against witches or ghosts (R. L. Bunzel, *Zuñi Ritual Poetry*, BAE-R 47: 683).—ECP.

<sup>23</sup> At Zuñi and Isleta the use of the left hand (or foot) is habitual in connection with rites for the dead. Here it would be said “the left hand belongs to the dead.” Among the Hopi all offerings are habitually made with the left hand and masks are put on and taken off with the left hand.—ECP.

including a lengthy burlesque of Pascolas or Deer dancers. During these fiestas they punish misbehavior.

Yaqui moral functions are more pronounced. During Lent civil government is suspended and the clowns punish severely all crimes with particular emphasis on sexual irregularity. They also are in charge of the Christ image, normally in the care of the military society.

During Lent all dead are buried by the clowns. Among the Yaqui relatives of persons dying during Lent are forced to give three annual mourning feasts instead of the customary single anniversary observance. All members of the Yaqui clown society, no matter when they die, are buried by the clowns. For the "wake," corpses of members are dressed in full regalia, including one of the two masks preserved throughout the year. The mask is burned after burial of the corpse. These and other data suggest members remain Fariseos after death.

In addition to the already mentioned functions in the Passion play of Holy week, Yaqui clowns, in conjunction with Pilate and his group, perform a dance on several occasions. The final performance is on Easter Saturday when they advance gradually to a curtain before the altar. There Pilate demands to see the "tomb" of Christ. When the curtain is raised showing the image gone, the group rushes from the church, pelted with leaves and confetti by Pascolas and Deer dancers. After three repetitions, the masks and paraphernalia are burned. (The Mayo also make three flights from church but do not dance.) Both peoples subsequently re-baptize the clowns, choosing new godparents.

After the services all gather in a circle near the door of the church and a speech is made (by their leader or the *maestro*?) and they thank one another. Mayo clowns give their godparents a bottle of mescal, pouring some upon the church floor. The Yaqui hold this ceremony after the fiesta finish on Sunday morning.

*Clowning Behavior by Dancers.* The Pascolas dancers also indulge in clowning behavior of a different sort. Between periods of dancing they tell jokes and stories, often lewd. "How well you danced," a spectator may say. "Surely, that was because I slept with your wife last night," may be the reply. Individuals are addressed by relationship terms. Satirical comments are made on personal behavior and community affairs. Yaqui Pascolas dancers indulge in horseplay with the Deer dancer, imitating the dance, hunting the "deer," simulating sexual intercourse with each other or masturbation.<sup>29</sup> This "play" is said to have been formerly performed by the Mayo also.

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<sup>29</sup> The clowning of the Yaqui Pascolas is especially like that of the Hopi Pi'túyakyamü.

Yaqui fiestas usually conclude, so far as dancing goes, with either the Badger Dance or the Deer Hunt. Each is an elaborate pantomime of hunting the animal of the dance with more or less stereotyped but informal dialogue with some obscenity. In both the "animal" is killed.

At the beginning of each fiesta among both Yaqui and Mayo the principal Pascolas dancer is led into the dance place, masked and uttering shrill falsetto cries, "the cry of the Pascolas." An elaborate ritual includes a prayer to the animals of the woods, crosses made to the directions, speeches to each musician, and a formal prayer to the saint asking "permission for what we are going to do." At the conclusion the Saint's pardon is asked.

*General Remarks.* The obscene behavior of both clowns and dancers is quite contrary to the ordinary conduct of life. Both Yaqui and Mayo are extremely modest, shy, and reticent concerning sex. They are not given to joking, the Mayo even less than the Yaqui. Clown behavior during ceremonies is not closely watched by adults. The dancers, on the other hand, have good audiences and their reputations hinge primarily on their abilities as jokesters. Appreciation is never boisterous, however.

Police functions of the clowns are especially evident among the Yaqui. Everyone is forced to join in processions, participate in church services, etc., so that, strictly speaking, there are no real spectators. This is not true during begging trips and errands. Then the clown is at his best and gets most attention.<sup>30</sup>

The relation of Yaqui clowns to the soldier group of Pilate suggests a possible former war connection perhaps also expressed in the view that the wooden sticks are weapons. Against this is the lack of direct connection today with the regular war society. Of course all clowns are members of the war group—but so is practically every other man of the village. Clown obligations, moreover, supercede all others during Lent. A soldier may perform the soldier's dance: ten minutes later he may dance with the Matachines if he be a member of that group. This duality of function is denied the clown. During Lent a member is a clown and nothing else for the time being.

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It should be noted, too, that certain Hopi kachina will clown or "play" with clown groups. One kachina performs mock copulation with the townswomen who get the gifts he distributes.—ECP.

<sup>30</sup> That the obscenity and clownishness are in part a vicarious outlet for a rather emotionally inhibited community is quite possible. This is especially evident with the dancers. The Pascolas may say and do, and the crowd may laugh at, things which are never said or done in everyday life. Ordinarily they would be not only offensive but grossly insulting.

The contemporary clown groups of the Yaqui and Mayo most probably are a modified survival of an aboriginal institution which the missionaries found easier to adapt than suppress. The record of the Jesuit missions in the region indicates a tendency towards assimilation of this sort. The aboriginal organization may have been quite similar. Membership was probably by dedication, trespass, or capture, and as the result of sickness. We may infer masks, rattle belts, cocoon rattles, and some sort of stick as parts of the costume. A vague war connection is to be suspected. Curing was almost certainly a primary function and by Pueblo analogies the group may have been associated with weather control, although this feature of Pueblo life almost certainly was little developed by the Yaqui-Mayo. Nothing in the present status of the clowns suggest weather control, but the horned water serpent is still a Yaqui-Mayo supernatural with close relations to the floods which are an essential but dangerous part of Cahita life.<sup>31</sup>

TABLE 2. COMPARISONS BETWEEN PUEBLO AND MAYO-YAQUI CLOWNS

	<i>Pueblo</i>	<i>Mayo-Yaqui</i>
Organization	Dependent on other groups, but usually have a chief. Volunteers from groups that are recruited by dedication, vow, or cure. Recruits from trapping Occasional and permanent, all members do not "come out," given female members, they do not "come out," attend on or play with dance groups.	Independent group, with chief, but given godparents from women's society. Volunteers from vow in sickness; recruits from dedication (rare), and trapping (boys caught wearing imitation masks). Occasional (duration of vow, Mayo), permanent (Yaqui); all members do not "come out;" the single female member observed does not "come out;" play with dancers.

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<sup>31</sup> Among the Hopi the water serpent images are carried from the house where they live to the house of the man offering their dance or ceremony. This entertainment of the gods in private houses is a marked Hopi-Zuñi-Aztec trait with which the Mayo-Yaqui custom is to be equated.

Among the Hopi the images of Water serpent may not be touched by young men lest they suffer disease, which suggests that Water serpent causes venereal disease in men.

In the Rio Grande valley Water serpent causes flood, as he also does in the myths of the western Pueblos, and, as we have noted, Water serpent is associated in ritual with the clowns, —ECP.

### Outfit

Hide or cotton mask (some horned, or horned headdress); befeathered, painted; or face painted; body painted; black breech cloth, or shabby clothes (old coats), or animal skins; leg rattles, turtle shell; hand rattles, berry necklace; bandoleer of flowers or with journey food, carry painted stick (Ne'wekwe), eagle feathers, knife, whip, basket, fawn-skin sack, blanket roll, drum, dried mud-hen, stuffed or live animals, anthropomorphic image, representing supernatural patron.

### Behavior

Make domiciliary food-collecting visits; perform manual labor for hosts, including fetching wood (Koyemshi); ritual continence (Koyemshi and more or less generally); capture boy impersonators of deer (Taos), chase children at large; do not speak when masked (excepting Koyemshi and Pi'ptu), using gestures; high pitched or falsetto voices; actual and simulated filth eating; backward conduct and speech; inspire fear; farce with Kachina.

### Function

Impersonation; come out at dances (and processions) and attend on dancers, sometimes dancing soberly the mask dance; get out dancers; restrain lookers-on; act as scouts; perform or direct manual labor for hosts or chiefs; burlesque; personal satire; discipline for children or adults; play or manage ritual games, races, hunt, farming; rain-making; control of Water serpent. In general: weather-control, popular amusement including vicarious sexual gratification, social discipline, and policing in ceremonies.

Hide mask, horned, hair left on for mustache or beard, painted, with feathers, bull and grandfather masks; shabby clothes (old coats), blanket doublet, belt with metal jinglers or deer hoofs; leg rattles of cocoon; rosary; carry painted wooden machete and lance, whip, mock dance rattle, drum, stuffed animals, doll to represent saint.

Make domiciliary food (and money) collecting visits; perform manual labor for hosts; no speech with women; capture or pursue children impersonators; do not speak, when masked, using gestures; falsetto calls; simulated filth eating; backward conduct; arouse concern. Impersonator of mask dance makes satirical jests often with sexual references, and engages in farce with Deer dancer, etc.

Impersonation; come out at processions and dances, sometimes dancing soberly the mask dance; guards for the Catholic images, being called soldiers or young (unmarried) members who may not wear mask serving as Pilato soldiery; get people out to church; restrain lookers-on; act as messengers; perform menial tasks at household fiestas; burlesque; personal satire; punish all offenses and crimes during Lent. In general, collecting church fund, popular amusement, social discipline or order, and policing in ceremonies.



## CONCLUSIONS

We think there is little if any doubt that between some of the so-called Grandfather or Abuelo clowns of the Pueblos, the Chapios, and the Chapaiyekas and Abuelos of Sonora there is an historical connection. In evidence are the association in New Mexico with the Matachina dance, the type of mask, the whip, and the association with Church fiestas. Probably Mexican colonists around San Juan<sup>32</sup> introduced the beclowned Matachina which spread to Taos<sup>33</sup> and to some of the southern pueblos.

But even given this probability many other queries arise; queries about the provenience of the Chapaiyeka in Sonora, about their earliest relationship to the Pueblo clowns or rather clowning elements, and about the history of the other clown types of the Pueblos.

The Chapio or Grandfather clowns are associated with the Matachina in New Mexico—traits borrowed from the same source are readily combined; in Sonora the Chapaiyeka are seen on many of the same occasions as are the Matachina, but they are quite distinct, they do not "play" with the Matachina although they may burlesque them just as they burlesque the Deer dancer or the masked Pascola dancers. Now the Matachina dance we believe to be the same dance as is called *La Conquista* in Nayarit, Jalisco, and Oaxaca, perhaps elsewhere, in Yucatan, Xtoles,<sup>34</sup> and in the Plateau, *Los Moros*, a European country dance introduced by the friars with varying degrees of dramatization and with or without colloquies according to the degree of hispanicization of the peoples they were dealing with. In all these dances appear two clowns, variously called *los Negros*, *los Negritos*, *los Diablos*, *los Viejos*, *los Mal Viejos*, *los Pilatos*. They usually wear wooden masks, with grotesque features or tusks, and usually painted black. They carry a whip with which they lay on, and frighten the children. They may carry a doll or a small stuffed animal with which they play various pranks. They gesture and do not speak. In the valley of Oaxaca<sup>35</sup> the *Negritos* tease

<sup>32</sup> In 1598, to celebrate the building of the church at San Juan, Oñate presented a sham battle between Moors and Christians, i.e., *Los Moros*! (G. P. Hammond, Oñate and the Founding of New Mexico, *New Mexico Historical Review* 1: 321, 1926).

<sup>33</sup> As Matachina was formerly danced at Los Ranchos, an early Spanish-Indian pueblo five miles from Taos, Mexican colonists may have carried it there directly.

<sup>34</sup> Starr, 11: 80-82.

<sup>35</sup> The Mixe of eastern Oaxaca perform a burlesque of the masked *Negrito* dance given at some of their towns. The *Negrito* dance is a serious dance performed on the occasion of important fiestas. The burlesquers are the *Viejos*, who elsewhere in Mexico would be known as *Negritos*, and men dressed as nearly as possible in the costume of city dwelling Mexican women. The *Viejo* is himself burlesqued by an unmasked clown with face blackened with charcoal. Still more significant is the custom at very primitive Mixistlan where, as part of a

the women by rubbing their faces upward with a neckerchief none to clean. If a chair is to be fetched for a visiting *señora*, or a dancer needs something, the Negritos look after it. Like the dancers the Negritos function *por promesa*, for a vow, often made for sickness, usually for one year, sometimes longer. These clowns must be equated with the Chapaiyeka. But were they all Spanish and introduced along with the country dance or were they pre-Spanish figures combined with the dance and the church fiesta? The Aztecs used "ugly" or "frightful" masks in some of their ceremonial celebrations.<sup>36</sup> The dance itself may have been based on a pre-Spanish dance, for Bernal Díaz writes that the Aztecs had a dance similar to the dance in Italy called *Matachines*,<sup>37</sup> and the Chamuscado account in Obregón mentions that in Chihuahua the Indians danced an imitation of the *Matachina* ("imitan al baile de los *Matachines*," says the Spanish version) with what was apparently a leather rattle and pottery drum, by which he meant no doubt that their dance suggested the European country dance.<sup>38</sup>

From now on our conclusions or discussion we keep separate. Our general bias differs. One of us inclines to see in the Mexican and New Mexican clowns the devil-clown of the European medieval miracle play and religious folk dances, the fellow himself introduced by Spanish friars and devotees to Indian peoples sensitive to ridicule or being talked about and familiar with travesty or doing the opposite of the customary in order to feel brave and defiant in war or sexually stimulated or masterful in domestic or political life. The other of us inclines to discount the Spanish influence and believes that out and out clowning, buffoonery for amusement, was a far-flung pre-Conquest Indian trait.

(ECP Writing)

The *Matachina* Grandfathers of San Juan (Pueblo) compared with those

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distinctly non-Christian ceremony for good harvests involving the sacrifice of dogs and chickens in the church, men dressed in burlesques of male and female Spanish costume dance *jarabes* before drinking liquor and leaving the church to attend the feast provided by the sponsor of the ceremony. And at the other extreme of the area considered the mountain Nisenan of California burlesqued the sacred dances of their foothill neighbors. Burlesque is surely not confined to Europeans'—RLB.

<sup>36</sup> Bernardino de Sahagun (Tr. by Fanny R. Bandelier), *A History of Ancient Mexico*, 1932, I: 95, 132.

<sup>37</sup> Bernal Díaz, *The True History of the Conquest of Mexico* (New York), 1927, I: 175.

<sup>38</sup> Balthasar de Obregón (Tr. and ed. by George Hammand and Agapito Rey), *Obregón's History of 16th Century Exploration in Western America*, entitled *Chronicle, Commentary, or Relation of the Ancient and Modern Discoveries in New Spain and New Mexico* (Los Angeles), 1928, p. 284.

of Alcalde (Mexican) show some imitation of Indian patterns, for example the masks are painted, but the acculturation is slight. If the other clown types of the Pueblos are derived from or have been affected by Spanish clowns the acculturation is much more profound, and of an earlier period. At one time I inclined to posit such early acculturation, deriving the bogey masks (and the Koyemshi) from the Spanish clown or devil or death masks.<sup>39</sup> The theory is involved of course with that of the origin and development of the kachina mask, and latterly in view of the evidence I find in Sahagún of the use of masks by the Aztecs in procession and dramatization in their mountain rain spirit cult, essentially a Kachina cult,<sup>40</sup> I believe the theory of Spanish influence must be greatly modified. The western bogey kachina mask, Atoshle, Natashka, Chavaiyo, may well have been pre-Spanish and the Hopi term Chavaiyo<sup>41</sup> extended to the clown impersonation derived from Sonora or Chihuahua<sup>42</sup> or southern Arizona.<sup>43</sup> Whether or not they

<sup>39</sup> E. C. Parsons, Spanish Elements in the Kachina Cult of the Pueblos, ICA 23, 582-86, 1928.

<sup>40</sup> E. C. Parsons, Some Aztec and Pueblo Parallels, AA 35: 611-13, 1933.

<sup>41</sup> Native Hopi etymology is cha>chachaiyûmû, children, and veyo, obsolete for hunter (Stephen, Hopi Tales, 14, n 2). For discussion of a possible relationship between Hopi bogey dramatization and the child sacrifice of the Aztecs, see Some Aztec and Pueblo Parallels, 616.

Dr Bennett suggests that chapeón, the clown term among the Tarahuamara, and the related terms among the Pueblos are derived from the Spanish term *capeón*, one who plays with the cape. "Los Capeos was a Spanish fiesta in which men used to take chances with the bull, without weapons." Note the bull masks among the Yaqui Chapaiyeka.

In Spanish sources Dr Bennett has found the term Matachine applied to a masquerading group who used wooden swords and inflated bladders.

<sup>42</sup> The Tarahuamara chapeones show both Mayo-Yaqui and Pueblo clown traits. The chapeones are in charge of the Matachine dancers who perform at church fiestas, valeting them, getting them out to dance, filling vacancies in the dance group. The chapeones stand in line to one side of the Matachine dancers, marking time and at changes in the figures shouting in falsetto. The head chapeón wears a wooden mask, painted with white lines, with a white wig and beard. During the dancing he shifts the mask to the back of his head. Two chapeones use inflated bull bladders.

The head chapeón has a position of social distinction: he dedicates the liquor at the house of the *fiesteros* and he sits with the judges at law trials (W. C. Bennett, The Tarahuamara, ms.).

<sup>43</sup> The occurrence of the Lententide Fariseo or "devil" among the Papago, together with the more formal type of clown who cures as well as entertains the people (see following paper by Dr Underhill), bears evidence to the Spanish character of the Fariseo of Mayo-Yaqui and Tarahuamara. Compare Fariseos of Tepoztlán, Morelos (R. Redfield, Tepoztlan, University of Chicago Publications in Anthropology, 1930, p. 111, n 1).

The Mescalero and Chiricahua Apache clown who entertains, cures, polices, and speaks for the other masked dancers (personal communication from Dr Opler) parallels in several ways the clown kachina of the western Pueblos.

wore masks or merely animal pelts as at Taos, the mountain dwelling kidnapping cannibals were presumably pre-Spanish.

As for the non-mask-wearing clowns of the Pueblos I suggest that many of their traits were those of the organized groups, weather-control or curing or war groups, particularly war groups, whence the clowns were drawn to enact the burlesques or farces that the Pueblos, like the Aztecs, Maya and Zapoteca<sup>44</sup> (and presumably the Mayo-Yaqui and the people of Nayarit)<sup>45</sup> considered part of ceremonial celebration. From war groups would come such traits as policing or managerial behavior, scouting, "making the road" or leading, foolhardy or perverse conduct like filth eating or gluttony, backward speech.<sup>46</sup>

Through functions in connection with scalp ceremonial, the enemy dead becoming rain makers, weather-control functions might be associated with clown groups, also rain rituals such as dousing with water or whipping against wind or cold or dancing for rain. The conception of contrary behavior might lead to the idea that the clowns connected with curing societies were possessed also of black magic.

Pueblo clown or near clown types are so varied that various sources

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<sup>44</sup> In the Aztec rain ceremony of every eight years there were impersonations of "poor people," wood carriers and peddlers, and sick persons (Sahagun, 146). These suggest the cast of the Hopi Pi'ptu comedies.

At the "feast of merchants" in Cholula there were games and comedies in the courts of the temples in which many appeared lame, deaf, or blind; others as snails, toads, lizards, butterflies and birds. Later they made a "mask or mummery with all these personages" (J. De Acosta. [Ed. by Clements R. Markham], *The Natural and Moral History of the Indies*, Publications of the Hakluyt Society [London], 60-61: 387-88, 1880).

Citing Landa, La Farge points out that comic dances were held in Yucatan before the Conquest, in the houses of those who wished to pay the dancers, as burlesque dances are performed today, by the Quiché of Guatemala, burlesques of the Deer dance and the Cortés dance (La Conquista or Matachina) during Carnival. The Mayan term for burlesque means old, referring here to the old clothes or rags that are worn (O. La Farge and D. Byers, *The Year Bearer's People*, Middle American Research Series, Publ. No. 3. Tulane University of Louisiana, 1931, pp. 109-110).

A burlesque of La Conquista is performed by the Mal Viejos, the Bad Old Men, in the Zapoteca town of Zaachila, at Carnival, and in other Zapoteca towns. At this season the Mal Viejos make domiciliary begging trips. The independent burlesque of the priests at Zaacalia is even more complete than such a burlesque would be among the Pueblos.

Possibly Indian and Spaniard converged in their sense of burlesque and Indian notions fitted readily into the Spanish Carnival.

<sup>45</sup> Clowning behavior is described at Tepic, in 1580 (Alonso Ponce, *Relacion*, etc., in *Colección de documentos inéditos para la historia de la España*, vols. 12-13 [Madrid], 13-76).

<sup>46</sup> See some of the Plains war societies. We should not overlook the fact that fully developed clown traits are found among Plains tribes independently of war societies (Spanish Elements in the Kachina Cult of the Pueblos, 596, n.53).

and processes of development must be considered. Mexican clowns on the other hand are more or less alike, and it seems strange that there should be so much similarity in the Spanish-Indian clown complex unless that complex was carried by the Spaniards. On the other hand more knowledge of both contemporary and ancient Mexican peoples may show an unexpected degree of cultural homogeneity in the pre-Spanish period. Burlesque, impersonation of supernaturals, rites of all kinds, political and ceremonial organization, may appear parts of a cultural system so submerged that as yet we have seen but a few of its peaks among scattering conservative peoples.

(RLB Writing)

If I were to modify the joint statement of conclusions in any important particular it would be to say that the *Negritos* or *Mal Viejos* of the Mexican Conquista dance are not to be equated directly to the *Chapaiyeka* or Sonoran clown: rather certain elements of their behavior are to be equated with the facets of *Cahita* (and *Pueblo*) clown behavior. Other aspects, particularly their masks and falsetto call, resemble those of the *Cahita Pascolas* dancer. Probably some of these traits, or at least their present forms and associations, are due to Spanish influence. On the other hand, Dr Julian Steward's analysis of the clown in North America (in ms.) makes it evident that clowning was a widely spread complex in most of North America which, while it had many varying associations in different areas, carried with it a number of relatively uniform behavioristic and functional traits. When all Dr Steward's evidence is available, I believe it will be plain that many of the behavior traits and functions of even the clowns associated with the Mexican Conquista and *Moros* dances have a distribution far beyond the areas of Spanish influence and in associations making it reasonably certain they represent part of the original American clowning complex.<sup>47</sup>

As a theoretical position I prefer Dr Parsons' second alternative, that the basic similarities of Mexican clowns are in large part elements from a general cultural system once widely diffused throughout Mexico. The presence of this cultural stratum has to some extent been obscured: first, by our lack of knowledge of northern Mexico; secondly, by its peculiar distribution owing to the non-agricultural or but partially agricultural peoples which at the time of the conquest and before formed a more or

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<sup>47</sup> See also Julian H. Steward, *The Ceremonial Buffoon of the American Indian* (Michigan Academy of Science, Arts and Letters 14: 187-207, 1930 [Publ. 1931]).

less central block in northern Mexico which partook of few elements of the culture we are considering.<sup>48</sup>

Granting the connection between the Matachin-associated Abuelos of New Mexico and the Yaqui-Mayo clowns, there remains an unexplained residue of associations between other Pueblo clown groups and those of Sonora. As has been pointed out, Yaqui-Mayo clowns are not specifically associated with the Cahita Matachin dances. Clearly the Abuelo or grandfather mask type of clown, a relatively unimportant Yaqui type, and the Matachine dance reached the Cahita separately and do not explain all inter-areal similarities.

It might be argued that those similarities which are not traceable to the Matachin association are also due to Spanish influence. However, they may equally well be similarities established in pre-Caucasian times. This latter view is strengthened by the presence of other striking similarities in the field of non-material culture. An example is the occurrence of sand-paintings which, despite the inadequacy of the early missionary account, have their every feature duplicated at some point among the Pueblos. Of unquestionable significance to historical deductions is also the fact that these resemblances are not established for any one Pueblo group: rather they are to be found, like many of the clown similarities, one feature in one group, one in another.

Because of the functional integration and importance of the organizational aspects of Cahita clowns we have assumed that in general if there has been borrowing it has been from Cahita to Pueblos rather than the reverse. But to assume that the clowns were an indigenous development of the Cahita-speaking peoples would controvert the general lack of originality in Cahita culture.<sup>49</sup> This type of argument is very unsatisfactory but it poses the possibility that the similarities of Pueblo and Cahita clowns are of a generalized type which were derived by both peoples from some third source as yet unknown. We come again to the hypothetical generalized Mexican culture of which the two groups under consideration represent specialized adaptations.<sup>50</sup>

<sup>48</sup> This situation is revealed and the outline of the general cultural stratum suggested in R. L. Beals, *Comparative Ethnology of Northern Mexico* (Ibero-Americana 2, 1932).

<sup>49</sup> The general account of the Cahita will give further material on this subject when it is finally published. Although complex and rather rich on the non-material side, Cahita culture contains very little not to be found in more developed form among neighboring peoples. Much of its complexity seems due to the fact the culture exhibits derivations from both north and south which have here fused.

<sup>50</sup> A few suggestive data may be mentioned in this regard. At Cuynacaro, Jalisco, at the time of the Conquest some of the Indians wore "many straws before the face in the manner

To carry this hypothesis one step further, it seems likely that it was from this generalized cultural stratum that the Spanish influenced Matachin and associated dances, whose Indian precursors have been suggested, and the attendant clowns, derived their evidently deep-rooted hold on the Indian. Likewise it was on this widespread basis the dances gained their extensive distribution, either as a making over of existing traits which had diffused previously or as a closely analogous substitute. Among the Cahita and Pueblos, however, we find surviving evidence of the pre-Caucasian traits themselves.

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of beards," interesting in the light of bearded masks in much of Mexico. (See Joaquín García Icazbalceta, *Collección de Documentos para la Historia de México* [Mexico], 2 v., 1858-1866, 2: 440.) In Tepic masked individuals performed clowning actions according to Ponce, who visited there in 1580 (Alonso Ponce, *Relacion breve y verdadera de algunas cosas, etc.*, in *Collección de documentos ineditos para la historia de la España*, vols. 12-13 [Madrid], 13: 76 "... salieron asimesmo muchos indios da á pié en traje de chichimecas, dando gritos y alaridos, discurriendo a una parte á otro, y dandose palos los unos á los otros en las adargas que llevaban,—y otros enmascaradas haciendo meneos y visajes muy vistosos y de reir"). This behavior resembled that described by De Acosta for Cholula (J. De Acosta, *The Natural and Moral History of the Indies*, pp. 387-88 see above, Note 44. Also cf. Sahagún, 146). Probably further elements will come to light as the documents are studied more closely.

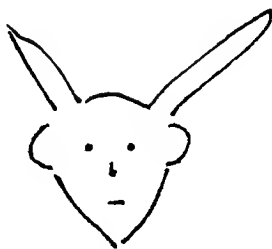
Anent the fiber beard ECP notes "The fiber beard is used on a mask in the Aztec Huasteca (Starr, 11: 72). It is also used by the Keres of San Felipe and Santo Domingo (White) and in early days yucca fibre instead of hair was used on masks by the Hopi (Stephen, 216)."

NOTE ON EASTER DEVILS AT KAWORI'K  
ON THE PAPAGO RESERVATION

By RUTH UNDERHILL

THE impersonations are usually called djidjiaur (Spanish, *diablo*) but informants also use the term Fariseos and nanawitcu (the ceremonial clown). The mask is not like that of nawitcu but like him they speak only in cries.

I did not see the devil mask, which had been burned, but an informant drew it thus:



There are three masks: one of calfskin, one of peccary, and one of deer. They are made by the wearers, at the house of an old man who has no office but knows the procedure. They are cut out of skin and sewed; the horns made of skin stuffed with hay. The devils are youths of eighteen or so who volunteer for four years as a way of getting blessings. The rest of their costume consists of old ragged clothes (formerly none). Each carries a long slender pole of cactus rib with which they touch and frighten people. (Nawitcu carries a long pole and so does another masked impersonation who blesses food at the harvest feast and is called kuadju'k.)

The devils appear on Wednesday, Thursday and Friday of Holy Week. During those days, every one guards his yard enclosure with a cross because anything not so protected may be appropriated by the devils. "This is to teach the people how to guard against bad people." The devils come around gesturing and scaring the children and will take anything outside the yard. They run after people and touch them with their long poles. The remedy is to make the sign of the cross when the devil will run away. If the devil has taken anything, one may chase him with a crucifix or make him an offering of a cigarette when he will drop the object and run away.

The devils are particularly active on Good Friday night. On Saturday morning, everything that they have taken is piled up in front of the church. The people come to claim their property and pay a cigarette or five or ten cents. Otherwise, everything is burned.



After the redemption of property, the devils are whipped with branches of *Encelia farinosa* (u:capkam, a gum bearing bush). This, when the devils were naked, was a serious affair and meant really to hurt. There is a whipper for each devil chosen by the old man previously mentioned who has charge of the arrangements. The devils do not resist but come docilely and kneel.

Just before the whipping, the people throw flowers on them. "These are from Santa Maria Guadalupe," they say. The reason is that "once when Guadalupe was on this earth, a man threw flowers on her asking for rain. You can see the flowers on her robe now although some call them stars." Throwing flowers has since been recognized as a way to ask for rain from the Christian supernaturals.

After whipping, the devils remove their masks and throw them on the fire where the booty is being burned. They say:

Now I shall feel happy.  
I shall relinquish my work.  
I shall continue four years,  
Then I shall finish.  
Whoever is a friend to me  
Will assume this duty  
And will follow  
As I did.

Three is not a necessary number for the devils. There may be fifteen or twenty, any number, according to the number of youths willing to volunteer. The masks are always of the three kinds. There is thought to be a blessing connected with it as there is for singing with the medicine man, which is not paid.

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A CRITICISM OF WISSLER'S  
NORTH AMERICAN CULTURE AREAS<sup>1</sup>

By CARTER A. WOODS

THE culture-area concept, as a means of classification of cultures useful for further analyses of the historic interrelations of particular cultures, has had its most active development among the American anthropologists. The comparatively uniform and undocumented mass of native New World culture almost necessitated a static, descriptive approach such as the culture-area idea offered.<sup>2</sup> As far back as the 'nineties, culture areas were not only "in the air" but actually being used in American ethnology. The specific areas had indeed scarcely been defined as to content or delimited on the map but they were generally accepted as obvious empirical findings and referred to in noting the spatial distributions of cultures and culture elements.<sup>3</sup>

While the culture areas of North America were largely a community product, representing "a consensus of opinion as to classification of a mass of facts, slowly arrived at, contributed to by many workers, probably accepted in exact identity by no two of them, but in essential outlines by all,"<sup>4</sup> it was Dr Clark Wissler who popularized the concept. His book, *The American Indian*,<sup>5</sup> was not only important because it delineated the culture areas of North and South America, but also because it gave impetus to similar studies of other cultures.<sup>6</sup> And while originally employed chiefly by anthropologists in the study of simpler cultures, it soon received more and more attention from sociologists and other social scientists who recognized the applicability of this mode of classification to the cultures of civilized societies.<sup>7</sup> Unfortunately, many of the social scientists, in their enthusiastic acceptance of this highly desirable classificatory device, ig-

<sup>1</sup> Based largely on a dissertation presented to the Faculty of the Graduate School, Yale University, in candidacy for the degree of Doctor of Philosophy, 1931.

<sup>2</sup> A. L. Kroeber, *The Culture-Area and Age-Area Concepts of Clark Wissler*, in *Methods in Social Science*, edited by S. A. Rice (Chicago), 1931, pp. 249-50.

<sup>3</sup> *Ibid.*

<sup>4</sup> A. L. Kroeber, *Anthropology* (New York), 1923, p. 336.

<sup>5</sup> New York, 1922 (First Edition, 1917).

<sup>6</sup> Cf. J. M. Cooper, *Culture Diffusion and Culture Areas in Southern South America*, Congrès International des Américanistes, XXI Session (Göteborg), 1925, pp. 406-21; M. J. Herskovits, *A Preliminary Consideration of the Culture Areas of Africa*, AA 26: 50-63, 1924; R. Linton, *Culture Areas in Madagascar*, AA 30: 363-90, 1923; H. D. Skinner, *Culture Areas in New Zealand*, *Journal of the Polynesian Society* 30: 71-78, 1921.

<sup>7</sup> Cf. M. M. Willey, *Society and Its Cultural Heritage* in *An Introduction to Sociology*, by Davis, Barnes and others (New York), 1927, pp. 495-507; C. Wissler, *Man and Culture* (New York), 1923, Chapter II *et passim*.

nored those limitations of culture areas which were apparent to competent anthropologists. Whereas Wissler<sup>8</sup> in his original paper on culture areas was concerned only with material culture areas, later he so gratuitously expanded the culture content of his areas as to give the impression that culture areas were regions with relative uniformity of total culture. Furthermore, while summarizing or generalizing from his material, Wissler occasionally slipped from his usual circumspect manner and spoke as if his inferences were proved facts. The result of this sketchy, loose-edged handling of data has been, as Kroeber suggests,<sup>9</sup> that Wissler's work has perhaps had most sympathetic appreciation in sciences outside the field of anthropology, and most criticism within.<sup>10</sup>

The North American culture areas were first formulated in connection with the classification of material objects in museum collections. According to Goldenweiser,<sup>11</sup> they had their origin in Professor Boas' attempt to classify and arrange the ethnographic specimens in the American Museum of Natural History. He found that the specimens seemed to arrange themselves in relatively homogeneous groups corresponding to geographical areas. Culture areas were thus in first formulation primarily "material culture areas." But in spite of the fact that the distribution of material and non-material traits is not identical (in fact the distribution of any two material traits is rarely exactly the same) it did happen that some features of the non-material culture coincided roughly with the material culture areas (e.g., Northwest Coast rituals or Plains types of tales and military-ceremonial organizations) which gave some areal distribution of cultures as a whole, or at least of their characteristic elements. It was this occasional rough coincidence which probably led to the subsequent gratuitous expansion.

On the other hand, though we do not expect to find culture areas with relative homogeneity of total culture, the distribution of non-material traits should not be neglected. For they are as essentially a part of the culture pattern of a particular civilization as the material traits, however they may be conditioned by these material traits. Therefore two interesting questions concerning Wissler's culture areas remain to be answered. Just how well do these areas, which were largely based on material traits but

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<sup>8</sup> Material Cultures of the North American Indians, AA 16: 447-505, 1914.

<sup>9</sup> The Culture-Area and Age-Area Concepts of Clark Wissler, p. 265.

<sup>10</sup> For partial criticism of Wissler's works and methods see R. B. Dixon, *The Building of Cultures* (New York), 1928, P. Radin, *Method and Theory of Ethnology* (New York), 1933.

<sup>11</sup> Diffusionism and the American School of Historical Ethnology, *Amer. Jour. Sociology*, 31: 34-35, July, 1925.

later freely expanded to include non-material traits, hold for the distribution of non-material traits? And can specific inferences, particularly as regards non-material culture, be drawn from the demarcation of any one given area?

To answer these questions the writer<sup>12</sup> made a thorough study of the non-material cultures of the Indian tribes of that territory which now constitutes the United States. The comparative distributions of traits and complexes pertaining to social organization, political organization, administration of justice, sex division of labor, war customs, marriage and family life, social life, the criteria of prestige, means of self-gratification, mortuary rites, religious life, etc., were critically examined. Over sixty such traits and complexes were considered, and at all times a genuine attempt was made to preserve their meaning and comparative importance in the tribal pattern. In no case was a trait divorced from its cultural setting. In all, 118 tribes, divided between seven<sup>13</sup> of the ten North American culture areas as demarcated by Wissler presented ethnographical data adequate to insure a critical treatment.

The traits and complexes were first tabulated with their tribal connections. The distributions of these traits and their variants were then graphically presented in map form. And on the basis of the charts and maps, statistical tables were drawn up to show both the number and percentage of appearances of the more important traits and complexes among the tribes of each culture area. The percentage of the tribes of any area possessing a given trait or variant was compared to the percentage of all tribes of all areas possessing that trait to indicate its relative importance in the culture pattern of the area in question. The statistical data served to bring to focus any vague impressions which might have been gained from an examination of the distribution maps.

Before making any generalizations from our own data, certain criticisms of Wissler's technique should be mentioned. In the first place, we are never quite sure in which area he classifies certain tribes. The concept "marginal tribe" allows for a vagueness of classification which is often quite disconcerting to the investigator. In some cases the marginal tribes appear to occupy the greater part of the territory denoted as a specific culture area. Consequently, it would seem that Wissler is more concerned with culture centers than with what he has called "culture areas."

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<sup>12</sup> A Critical Analysis of the Culture-Area Concept. Doctoral Dissertation, 1931: deposited in the Yale University Library

<sup>13</sup> California, North Pacific Coast, Plains, Plateau, Eastern Woodland, Southwest, Southeast.

By an elimination of all tribes in which there appear to be insufficient data and those which might suggest foreign origin, Wissler reduces the total number of tribes within a geographical area to a few which he considers to represent the culture type of the area. And yet from these few he proceeds to draw generalizations for the whole region. His treatment of the Eastern Woodland area illustrates the point in question.<sup>14</sup> The Iroquoian tribes are eliminated because their culture tends to suggest southern origin. The eastern tribes are eliminated because they are not well known and seem to have been influenced by Iroquoian culture. There is a definite lack of data on the Peoria, Illinois, Miami, Kickapoo, Ottawa and Shawnee, thereby eliminating them from consideration. There remain therefore, only the Ojibway, Menomini, Sauk and Fox, and Winnebago, which represent the type culture of the entire region. And yet all the above-mentioned tribes, which have been so carefully eliminated, are included in the same category of the Eastern Woodland area. The fallacy of generalizing from the cultures of a few tribes located in a restricted region for the culture of an entire area is apparent. A classification which includes in the same category such diverse cultures as those of the Fox and the Iroquois does not hold to the ethnographical facts. And we should here note that adequate data are now available on many of the tribes of the several areas which have been eliminated from consideration as type cultures.

Likewise, Wissler<sup>15</sup> classes the Pueblo tribes together with the nomadic tribes of the Southwest in one culture area. The Pueblo culture is then taken as the type for the whole region. We have his statement that common cultural bonds between all the tribes of the Southwest unite them in one cultural whole. Now it takes no more than a casual reading of ethnographic data to bring to mind the fact that these two groups of tribes, the Pueblo and the nomadic, possess cultures which are essentially dissimilar. Lowie<sup>16</sup> has emphasized this fact in his comparison of the cultures of the Hopi and the Navaho. It is further corroborated by our own investigation.<sup>17</sup>

A third example of over-hasty and invalid generalization is to be found in Wissler's treatment of the Plains culture.<sup>18</sup> For the eleven typical tribes of this area the unit of social organization tends to be the simple band. If we may take these tribes to represent the type culture of the area, as Wissler assures us we are justified in doing, we should expect the band organization to be the predominant unit. But our ethnographical data show us that not

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<sup>14</sup> *The American Indian*, pp. 234-37.

<sup>15</sup> *Op. cit.*, pp. 239-42.

<sup>16</sup> R. H. Lowie, *Culture and Ethnology* (New York), 1917, pp. 50-51.

<sup>17</sup> See below.

<sup>18</sup> *Op. cit.*, pp. 218-22.

quite one half of the Plains tribes have the band system. Clan organization with either patrilineal or matrilineal descent seems even more widely distributed.<sup>19</sup> Thus if we take the band organization as typical of the Plains culture we gain an erroneous impression of Plains social organization.

Now what conclusions may we draw from our own study of the non-material cultures of Indian tribes? In the first place, our data show rather conclusively that the variants of culture traits and the culture traits and complexes themselves do not tend to cluster in the manner which we should expect if the North American culture areas were to hold for all phases of culture. We are impressed by the heterogeneity of culture traits within the geographic regions which have been marked out by Wissler as culture areas. To be sure, there is a tendency for similar traits to cluster within certain limited areas encompassing a small number of tribes. For example, the Ojibway, Menomini, Fox and Sauk, and the Winnebago show similar non-material cultures. As do the Iroquois, Delaware, and Huron; the Yuchi, Cherokee, and Muskhogean tribes; the Coast Salish; the tribes of central California; the Pueblo tribes; and certain of the Plains tribes. These groups all show a relatively high homogeneity such as should be expected as the result of adaptation to common geographic conditions combined with the leveling effect of the diffusion process. They correspond roughly to Wissler's culture types, but they constitute only a portion (sometimes a minor portion) of the total number of tribes within the culture area. There is no reason why they should serve as the basis of generalization for the entire area. The regions are too widely drawn to possess a relatively uniform total culture.

It is also apparent that certain culture areas appear to possess more homogeneous traits and complexes than other areas. If we classify those traits or variants which are relatively homogeneous in any area, appearing in two-thirds or more of the tribes of that region and showing relatively the same importance in the culture pattern, we have the following results:

*California.* Patrilineal descent and inheritance; succession patrilineal and dependent on wealth which is patrilineally inherited; village government; compounding of murder; house-building a male occupation; definite media of exchange; prestige reckoned on the basis of wealth; polygyny permitted; definite puberty rites for girls; tattooing prevalent; absence of sun deities. Homogeneous in twelve traits.

*Plateau.* Band social organization; patrilineal inheritance; village government; puberty rites for girls; grave-escorts of animals; visions important in religious life. Homogeneous in six traits.

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<sup>19</sup> Our evidence shows eleven Plains tribes with the band system, ten with patrilineal clans and four with matrilineal clans.

*North Pacific Coast.* Band social organization;<sup>20</sup> patrilocal residence; patrilineal descent and inheritance; succession patrilineal and depending on wealth; slavery prevalent; house-building a male occupation; definite media of exchange; enslavement of conquered peoples; prestige reckoned on the basis of wealth, tattooing prevalent; polygyny permitted to prominent men; puberty rites for girls; head-deformation prevalent; wife purchase common. Homogeneous in fifteen traits.

*Plains.* Succession dependent on personal characteristics; tribal government; agriculture and house-building female occupations; prestige reckoned on the basis of success in warfare, polygyny prevalent; mother-in-law avoidance; warrior societies usually with regulative functions; Sun dance; sacrifice of human exuviae; animal grave-escorts; visions important; sun divinities; guardian-spirit concept; fasting. Homogeneous in fifteen traits.

*Southwest.* Agriculture predominantly a male occupation; puberty rites for girls; totemic names; sacrifices of meal and prayer-sticks. Homogeneous in four traits.

*Eastern Woodland.* Algonquian linguistic stock; existence of moieties or phratries; agriculture a female occupation; prestige on basis of personal merit (leadership, oratory, etc.); totemic names; sacrifices of food, tobacco, and animals; visions important; sun diets; guardian-spirit concept; fasting important. Homogeneous in ten traits.

*Southeast.* Clans; matrilineal descent and inheritance; blood revenge for murder; agriculture predominantly female; house-building male; torture of the conquered; prestige on the basis of warlike virtues; totemic names; priesthood; food sacrifices. Homogeneous in eleven traits.

Thus the North Pacific Coast and the Plains tend to show more homogeneity in non-material culture than do the other areas. There is little choice in this respect between California, the Eastern Woodland, and the Southeast, all of which rank somewhat lower than the leaders. The Plateau and the Southwest are conspicuously low; the Plateau failing to show a distinctive culture of its own, and the Southwest being divided into three major ethnologic provinces.<sup>21</sup>

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<sup>20</sup> It is to be noted that the bands of the North Pacific Coast tribes are not comparable to the territorial bands found among many of the Plains tribes. The Makah for example, and contiguous tribes both north and south, have settled in definite villages which are composed of several "bands" or septs.

<sup>21</sup> 1. The Pueblo group. 2. The southern outline of the Plateau area (Apache, such Yuman tribes as the Havasapai and Walapai, and the older Pima-Papago culture). 3. Lower Colorado area (Mohave, Yuma, Cocopa, Maricopa) which is neither Southwestern nor Californian. The Navaho culture is basically an agriculturized form of No. 2 with a heavy overlay of No. 1.

At first glance these lists may seem impressive. But when it is taken into consideration that in the areas which show greatest uniformity in non-material culture, of the sixty or more traits and complexes subjected to investigation, only fifteen tend to cluster or concentrate, then the folly of hasty generalization becomes apparent.

When the dominant variants of each trait are tabulated, showing the percentage of tribes among which they appear in each area, our evidence above is further corroborated. For instance, in the case of traits whose variants are mutually exclusive,<sup>22</sup> if these culture areas are to present a valid classification of non-material culture as well as material culture, then we should expect the dominant variants of all areas to appear in at least two-thirds of the total number of tribes. Instead they concentrate about the 50 percent mark.

Thus we conclude that even as a static approach to the understanding of aboriginal culture, Wissler's culture areas leave much to be desired. Because there has been a tendency to draw them so carelessly and to interpret them so broadly, they have often failed to provide accurate information concerning the cultures of specific tribes. Perhaps man in his irritation and terror of all that is indefinite, intangible, and unpredictable in life, is too prone to make the imponderable ponderable, and all facts definite, tangible, and precise.<sup>23</sup>

The failure of the distribution of non-material elements to coincide with the material culture areas does not, however, invalidate the regional approach. It is still possible to recognize the spatial distribution of culture elements and the significance of this circumstance. But it does illustrate the necessity of care to be taken in its application. Boas had come to a similar conclusion when he wrote:<sup>24</sup>

The assumption that the generalized characteristics of the culture area are present in any one of the constituent social groups may give an entirely erroneous picture of the integration of cultural values. . . . The description of a typical tribe gives a safer insight into integrated culture than the description of a culture area. On the other hand, an analysis of culture area as defined from various points of view, material culture, social organization and beliefs, gives us an insight into the conditions that helped to shape each individual culture.

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<sup>22</sup> For example, it is most unusual to find matrilineal and patrilineal descent existing within the same tribe.

<sup>23</sup> Radin, *Method and Theory of Ethnology*, pp. 40-41.

<sup>24</sup> *Anthropology*, in the *Encyclopaedia of the Social Sciences* (New York), 2: 105-106, 1930.



CH'EN TING'S ACCOUNT OF THE MARRIAGE  
CUSTOMS OF THE CHIEFS OF YUNNAN  
AND KUEICHOU<sup>1</sup>

By JOHN K. SHRYOCK

THE Chinese who wrote this little work flourished during the latter half of the seventeenth century. As a boy and young man he witnessed the troublesome early decades of K'ang Hsi. The preface to his book, which he wrote many years later, gives the main events of his life. The rebellion which he mentions is obviously that of Wu San-kuei. The edict of K'ang Hsi changing the style of the examination essays was issued in 1663, and first enforced in 1664. As Ch'en Ting says that he was fourteen at that time, he was born in 1651. This would place the marriage described in the book in 1667. To his own account of his life it may merely be added that he became a well-known scholar and author. Pelliot cites a number of his published works.<sup>2</sup>

A French translation of Ch'en's work, made from a different text from that used here, was published in the *T'oung Pao* in 1905.<sup>3</sup> The translator was a Chinese named T'ang Tsai-fu. The author of the English version wishes to acknowledge his indebtedness to his work. This new translation has been made for three reasons. First, a much older text has been used. Second, the work is important, and appears to be unknown to English speaking ethnologists. It is not mentioned even by Granet in places where one would expect him to make use of it. Third, whether because he used a later text, or for other reasons, T'ang's version contains a number of serious mistakes. Some of these are mentioned in the notes. Among those not so mentioned are his use of "opium" instead of "tobacco," his translation of a phrase as "oldest daughter" when it should be "oldest daughter of the first wife," his failure to identify the various varieties of wood used and his mistakes in those he does try to identify, his translation of the phrase *Chou li* as the name of a book when it should be rendered as "the Chou ritual," his use of the word "copper" where the word should be "bronze,"

<sup>1</sup> The Chinese title of the book is (1) [Numbers in parentheses refer to the Chinese characters in the accompanying cut], and the author's name is (2). The text used in this translation is that found in the (3), of (4), published in the closing decades of the 18th century. The text used by T'ang is that of the (5), which is about 100 years later. Ch'en's book was originally published about the beginning of the 18th century, but the text no longer exists except in collections of reprints. The text used in this translation is the oldest now in existence. In his review of T'ang's translation, Pelliot hopes that a comparison will eventually be made with the text which has now been used. On the question of the introduction of tobacco to China, the best authority is B. Laufer, *Tobacco and Its Use in Asia* (Chicago, 1924). The author wishes to acknowledge his indebtedness to Mr. H. Y. Feng for assistance in making the translation.

and his translation of a three-word phrase meaning "wedding feast" as three separate terms. The question as to whether the word *yen* ("smoke") should be rendered as "opium" or "tobacco" is interesting. The term is used for both substances. In 1673, tobacco had already been introduced to the coast cities of southeastern China by western traders, and the account

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|--------------|-----------|-------------|
| (1) 滇黔土司婚禮記  | (20) 郡主   | (39) 石膏     |
| (2) 陳鼎       | (21) 刀耕火種 | (40) 債相     |
| (3) 知不足齋書    | (22) 梨    | (41) 桂子湯    |
| (4) 範廷博      | (23) 檀    | (42) 桂圓     |
| (5) 小方壺齋輿地叢鈔 | (24) 香    | (43) 鎮紙     |
| (6) 驚        | (25) 柘    | (44) 衍圈     |
| (7) 姐        | (26) 紫檀   | (45) 刺      |
| (8) 羅人       | (27) 花梨   | (46) 戴星而往還  |
| (9) 驚人       | (28) 焚皆   | (47) 玉真仙姐   |
| (10) 苗       | (29) 沉速   | (48) 道緣     |
| (11) 龍       | (30) 安息   | (49) 禮失而求諸野 |
| (12) 鳳       | (31) 蘇合油  | (50) 禮      |
| (13) 安       | (32) 仲家   |             |
| (14) 火濟      | (33) 牂羊苗  |             |
| (15) 膝       | (34) 黃毛猓猓 |             |
| (16) 宣慰      | (35) 白猓猓  |             |
| (17) 阜東柘寮    | (36) 黑猓猓  |             |
| (18) 以爲內     | (37) 威靈仙  |             |
| (19) 郡馬      | (38) 硃砂   |             |

<sup>2</sup> Bulletin de l'École Française d'Extrême Orient 6. 402, 1906.  
Vol 6 572-622.

given in the preface of its spread into the interior by an enterprising merchant is very plausible. On the other hand, the author of this article does not know of any evidence for a wide-spread use of opium at such an early date. Dates from 1530 to 1600 are assigned for the introduction of tobacco from Japan or the Philippines. Its use was vainly prohibited by the last Ming emperor. The poppy is mentioned in China as early as the eighth century, while in the twelfth century opium is mentioned as a medicine for bowel trouble, but Morse<sup>4</sup> states that the smoking of opium came in through the use of tobacco, with which it was mixed. The first European notice of opium smoking is in Java in 1689, and the first edict against its use in China is in 1729.<sup>5</sup> In view of these facts, it seems clear that by *yen*, Ch'en meant tobacco.

Mr T'ang devoted considerable space in his notes to identifying the various aboriginal groups mentioned in the work. The opinion of the author of the English version is that more and better field work must be done in southwest China before it will be possible to make accurate statements. Much of the material now available is contradictory and inaccurate. Neither the languages nor the cultures have been adequately studied. The ethnic situation is very confused.

Nevertheless, the observations of Chinese like Ch'en Ting are of great value. He was in a position to observe the customs of the people he describes which no European has ever occupied. Although not an ethnologist, he was a trained scholar. The language used appears to have been some dialect of Shan and he mentions a written form of this language. The material culture had most of its connections with southern countries. There were two distinct groups in society, the lower having a non-Chinese culture, while the upper clung tenaciously to Chinese customs which had disappeared in China centuries before. The exact classification of details must wait upon further knowledge. It may be noticed however, that the ceremony of capping, the institution of the sororate, the custom of a concubine leaving her husband before dawn, the gift of a wild goose at the betrothal, and other features mentioned, are abundantly illustrated in ancient Chinese literature. The traditions of the Lung family as to the origin of their Chinese culture cannot be accepted at their face value. On the other hand, the document illustrates the preservation of specific features of culture on the margins of civilization long after they had disappeared at their point of origin.

The work is also of value as a record of the personal feelings of a cultured

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<sup>4</sup> Morse, *The Trade and Administration of the Chinese Empire*, p. 326.

<sup>5</sup> *Encyclopaedia Sinica*, article *Opium*.

Chinese. This document gives a glimpse into the private lives of Chinese of the better class. Delicate situations are handled with tact, and sex is never referred to in a coarse or blunt manner. One may sympathize and smile at the boy of seventeen who could not ask questions about sex of his mother and uncle, and who did not discover for six months that he had acquired eight concubines, or at the pathetic girl-wife calmly making plans for her successor. The reader of this little book feels that he has come into personal contact with charming persons whom he is able to understand despite the differences of culture. With Ch'en Ting, we can sigh as we turn the pages of a vanished romance of youth.

#### CH'EN TING'S PREFACE

When I was ten years old, my father's brother took me to Yunnan, where he had been appointed an official. After a year there, he died. Because of sickness, my uncle's son did not accompany us to Yunnan. I was 10,000 *li* from my home. I opened my eyes, and there were no relatives. We lived in the western suburb of Ch'ou ch'uan, in the temple of Shou T'ing Hou [Kuan Yu] of the Han dynasty. Within a year more than forty of our relatives and servants died. The coffins lay in heaps on both sides of the building. The sorrow of this scene cannot be described. Of all our establishment, there were left a secondary wife of my uncle, named Ch'ien, her brother, Po-k'o, and his wife, my teacher, Hua Lung-yu of Liang-ch'i, two young maid servants, a small serving boy, and two old servants, a man and a woman. It was difficult for us to maintain this household of eight people in a strange place.

Grain and fuel are cheap in Yunnan and Kueichou, but salt is very expensive. A picul of salt was worth a catty of silver, so we went without salt the whole year round. My aunt worked day and night with her needle, but could not earn enough to support us. Po-k'o was at his wit's end. He persuaded my aunt to change her jewelry into money, and using this as capital, he became a tobacco merchant, importing the tobacco from Kuangtung and Fukien. At this time the southeast had been recently pacified [after the Manchu conquest]. The civil and military officials were addicted to the use of tobacco, and so smoking became popular. Due to this, the family became better off. Unfortunately my teacher, Mr Hua, died.

Mr Ch'ien Po-k'o was an expert calligraphist, a poet, and a good lute player. His wife, Yen, was a good painter, and could play the flute. Although in hunger and poverty, they often played the lute and the flute to comfort themselves and us. Later, Po-k'o sold tobacco to the native chiefs [T'u ssu] and met the Hsüan-wei Lung. They soon became well-acquainted, and

the chief engaged him to teach calligraphy to his sons. His [yearly] salary was a hundred taels of silver and a hundred piculs of grain. This enabled the family to buy clothes, salt, and other necessities.

Somewhat later, his wife, Yen, died, leaving a nine-year-old daughter. The girl grieved continually. My aunt pitied her, and taught her to read and write in order to shift her sorrow. She became acquainted with the *Lieh nu chuan* [biographies of famous women] and other books.

After the death of my teacher, I had no one to instruct me, but my aunt continued my education. When I was fourteen years old, I was expert in writing the kind of essays required in the competitive examinations. At that time, an imperial edict changed the *pa-ku* style to the *lun-tse* style. The scholars of distant parts were ignorant of the *lun-tse* style, and were astonished at the change. Some said that the boy of the Ch'en family [the author] could write the new style, and that his essays would be acceptable. For this reason, more than two hundred old scholars, with white hair and eyebrows, came from far and near in the district of Chin-ch'uan to learn of me. I received two hundred piculs of grain a year in tuition, and became well-to-do.

Po-k'o having become a teacher of the native chiefs, and a marriage bond being established, he pitied us because we were far away, and arranged for our removal to the chief's residence. The *Hsüan-wei*, father and son, loved me because of my literary ability. The father tried me with seven essays, and all were good, so he betrothed his eldest daughter to me.

Among the chiefs of eastern Yunnan, the most cultured were the Lung family, who were descended from the Chi clan of the Han valley during the time of the Chou dynasty. Nine out of ten of the members of this clan could read and speak Chinese. Everything among them was done according to the Chou customs, so that their place was a land elegant in ritual and music.

When I was sixteen, I succeeded in the examinations in Tien. Originally my personal name was T'ai-hsia, and my courtesy-name, Yu-ting. Because my father had been appointed an official in O, my civil registration in my native place had been canceled. So I used my courtesy-name as a personal name, in order to acquire the military registration [of my father].

When I was seventeen, I returned from the capital, and consummated my marriage with the daughter of the Lung family. [This was probably in 1667]. [When I was] eighteen, my eldest son, Chia-mo, was born, and my concubine Lan-fang bore my second son, Chia-hao. At nineteen, my third son, Chia-mo, was born. The following year I remained in the capital.

I returned at the end of the year. My wife had fallen sick in childbirth, and died in the early summer.

My wife had the personal name Chi-huan, and her courtesy-name was Yu-shao. She was three years younger than I. As a child she knew the spoken and written P'o language [the Shan language]. She was expert in painting flowers, plants, birds, animals, and landscapes. She understood Chinese. She served her mother-in-law with filial affection, and was kind to the concubines. During her whole life she never used sharp words, or had an irritated manner. She seldom laughed or spoke. Often she sat all day without speaking. To be with her was like sitting in a cave of ice and snow. After our marriage, she studied daily with her mother-in-law the *Analects*, *Mencius*, the *Book of Filial Piety for Girls*, and other works. She could recite anything after reading it twice. After a year's study she understood the thought of these works, and could compose essays. She learned the calligraphic style of Madame Wei and the two Wang, approximating their style after half a year. Alas, to die at the age of seventeen!

When I was twenty-one, during the winter, my aunt [literally, uncle's concubine] ordered me to marry [a girl of the] Ch'ien family. Her personal name was Che, her courtesy-name, Yü-su, and she was a native of the village of Ku-shan, in the district of Hai-yü. She was the eldest daughter of Po-k'o. She was four years younger than I. She could read and compose poetry, especially in the *tsu* style. Her character was sweet and virtuous. When my first wife was alive, the two girls loved each other. When I was away from home, they lived together. They slept on the same long pillow, under the same quilt, embracing each other like sisters. When my first wife was dying, she told her parents to give all her things [to the Ch'ien girl], saying, "My parents, I desire you to treat her as your own daughter. Then I will close my eyes in the next world." When she died, Ch'ien was much grieved. My wife's parents thought that because she served my aunt filially, and had been sincere toward their daughter, they could love her deeply. They adopted her as their daughter, and married her to me, giving her a dowry several times greater than that they gave to their own daughter.

The following winter, my fourth son, Chia-yu, was born. I returned to Yen [Peking]. The next year I travelled in Ch'in [Shensi], so I did not return to Tien [Yunnan]. The rebellion broke out. [The rebellion of Wu San-kuei.] I followed the commander-in-chief of the southern expedition. After two years, I entered Kuan [literally, the pass, i.e., Shensi] as the official of Yung-ch'uan. After some time, I was dismissed because of my negligence, so I began my career as an adviser, which occupied me for five years. When

Tien and Ch'ien [Kuei-chou] had been completely pacified, I returned to find that Ch'ien had been dead for ten years. I interrogated her servants. All said, "Because of the troubles, all communications with the south were cut off. She died in sorrow and weeping." Alas, I had been deeply ungrateful to her. A maid-servant, named Ju-chu, had been educated by her. She also was a good artist, had studied the *Chiu chang suan fa* [an ancient work on mathematics], and could calculate eclipses of the sun and moon without the slightest error. I depended upon her to soothe my sorrow. Within a year she bore a daughter, but never fully recovered, and died less than half a year later. A little later, my mother also died. Alas, how full my life has been of misfortune!

After the maid-servant died, I examined her boxes, and found a manuscript called the *Ch'ing lo kao* [verses and essays], composed by Ch'ien, and a manuscript of my own, entitled *Tung chung feng t'u* [literally, "Customs among the Caves"]. My four sons asked me to publish it, saying, "Perhaps it will cause the name of our mother to be handed down to posterity." But I was hurrying in all directions [obliged to support himself], and had no time for this. Alas, again twenty years have passed. This spring, my fourth son has sent me the manuscript from Tien. As I turn its pages, involuntarily my emotions are aroused. So I have added the beginning and end of these troubles to the beginning of this book, and have given it to the printer. A man of Chi-yang, "The Iron-shouldered Taoist" [a pen name], at the inn of Hsin-an.

#### TEXT

Lung t'u-ssu of Tien [Yunnan] and Ch'ien [Kueichou] was originally of the Lung<sup>6</sup> clan. During the Chou dynasty, this was one of the Chi<sup>7</sup> clans along the Han river, which the *Tso chuan* calls the Lo<sup>8</sup> and Lung<sup>9</sup> peoples. When the state of Ch'u conquered the states of Sung, Tsai, Lo, and Lung, captured their princes, and exiled them to the south, they became Miao.<sup>10</sup> To this day in Yunnan and Kueichou there are Miao of the Sung, Tsai, Lo and Lung surnames who are their descendants. The costumes, capping [at puberty], marriage, funeral, and sacrificial ceremonies of these four clans are strictly according to the Chou ritual. The first month of their year is the eleventh month of the Chinese calendar. Marriages are arranged by

<sup>6</sup> (6).

<sup>7</sup> (7).

<sup>8</sup> (8).

<sup>9</sup> (9). This tradition is almost certainly incorrect.

<sup>10</sup> (10). The term Miao is so generally used by the Chinese that it is not of much value in identifying a particular group.

matchmakers, and are performed only when the six ceremonial acts have been completed.<sup>11</sup>

During the time of the Three Kingdoms, two Lung brothers followed Chu-k'o Liang against the southern barbarians. On account of his merit, the elder was made prince of Eastern Yunnan and founded the Lung<sup>12</sup> clan. The Younger was made prince of Southern Yunnan and founded the Feng<sup>13</sup> clan. Each changed a part of his written name.<sup>14</sup> During later generations, these two clans were the chiefs of the Miao. They received their titles from the Shu Han dynasty at the same time as the An<sup>15</sup> and Ho-chi<sup>16</sup> of western Kueichou. Even now their houses are palatial.

These four clans were bound by marriage ties, generation after generation. The oldest daughter of the first wife must marry the oldest son of the first wife of one of the other families, and each daughter was accompanied by eight bridesmaids or concubines.<sup>17</sup> This preserved the ancient custom of the nobles marrying nine girls at one time. These bridesmaids or concubines were drawn from members of the same family, or selected from the well-to-do families [of the common people], but the eldest daughter of the first wife was never allowed to become a concubine. The eldest sons of the Chinese officials might marry the eldest daughters of these four families. This was an expression of the idea that the emperor's officials are equal to the nobility. These Miao were never married to ordinary Chinese, and the daughters of even the lower officials of the Miao are seldom given to ordinary people.

When I was a young man, I was greatly valued by the *Hsüan-wei*,<sup>18</sup> father and son, because of my literary achievements. The elder betrothed to me his eldest daughter. The ceremonies of asking the name, thanking for the name, preliminary presents, betrothal presents, the personal visit, and the gift of a wild goose, were performed strictly according to the Chou ritual.

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<sup>11</sup> The six ceremonial acts are enumerated later. They do not agree exactly with the account given in the *Book of Rites* (Sacred Books of the East Series, 28: 428-29).

<sup>12</sup> (11).

<sup>13</sup> (12).

<sup>14</sup> The text is a little more explicit, but would have no meaning in English. A glance at the Chinese words will show the changes which were made.

<sup>15</sup> (13).

<sup>16</sup> (14). T'ang translates these three words as the name of a single person, whom he identifies with a man of the Han period. This is questionable, and here the three words are taken as indicating two families.

<sup>17</sup> (15) In order to make the text clear, this term is translated as "bridesmaid" up to the time that Ch'en learned the real meaning, after which it is translated as "concubine."

<sup>18</sup> (16). The title of the chief.



I, a sojourner in a strange land and as poor as if washed, how could I be able to prepare the gifts? They were all given to me by the parents of my betrothed. They thought that as I was of the scholar class and could not perform the great ceremonies in my humble house, they would build a residence for me about a *li* west of their yamen. It was on the site of the residence of the *Fou-tung-che-ch'a*<sup>19</sup> during the time of the Three Kingdoms. *Che-ch'a* is the Miao term for the chief's son-in-law. They call their daughters *Yi-na*.<sup>20</sup> These terms have Chinese equivalents.<sup>21</sup>

Since the Lung were princes, their son-in-law *Fou-tung* was made an official.<sup>22</sup> He followed Chu-k'o Liang to Ssuch'uan, and was appointed the official of Shih-chung. Later his family also moved there, and the residence was vacated. They now used the same site for my residence. Around the place were several thousand cottages covered with straw and clay tiles, all occupied by their kinsmen and servants. They practiced agriculture with sword-ploughing and fire-sowing.<sup>23</sup> Their customs were primitive, resembling the customs of the three dynasties. Often they executed people, and were very strict about incest and adultery. Any such offence incurred capital punishment, and even their own sons were not exempted. If men of the subordinate tribes were mischievous, bewitched people, or plundered the Chinese, they were often caught unprepared by the chiefs and punished immediately, their wives and children becoming slaves. If they were not dealt with in this way, or if the matter were referred to higher [Chinese] officials before action was taken, it often meant months before anything was done. The criminals would become aware of what was going on, and

<sup>19</sup> (17) This phrase is evidently a transliteration, and might give a clue to the dialect. The author has not been able to identify it.

<sup>20</sup> (18)

<sup>21</sup> The Chinese terms are (19) and (20). They were used only for members of the hereditary nobility. The first term indicates a husband of a noblewoman, somewhat resembling the English "prince-consort." The second indicates a woman of the nobility. These terms are not given in Chen and Shryock, *Chinese Relationship Terms*, AA 34: 623-69, 1932.

<sup>22</sup> Chu-k'o Liang, here referred to by his title, the Marquis Wu, is the spiritual patron of the provinces of Yunnan and Kueichou. He is an historical character, 181-234 A.D., and an account of his expedition to the southwest is given in the *History of the Three Kingdoms*. A wealth of legends has gathered about him. Unfortunately very few facts about the expedition are known, and the legend that a given chief was appointed by Chu-k'o must be regarded as doubtful.

<sup>23</sup> (21) An ancient method of agriculture which is unknown to the modern Chinese or the modern Shan peoples of Indo-China. It probably consisted of burning the dead vegetation, and turning over the soil with an implement resembling a sword. In central China today the grass on the hillsides is burnt during the autumn, and rain carries the ashes into the cultivated valleys. The modern Shan are said to use a plough pulled by a water-buffalo.

would rebel with their whole tribe. These people cannot be controlled by such light punishment as a beating, and are frightened only by decapitation. There is no other means of keeping order among such people.

The mansion erected [for me] included thirty parallel buildings, and each of the ten central buildings contained five chambers. There was a front gate and a ceremonial gate; a grand hall, a second hall, and a third hall. All were of one story. Behind the other buildings were five pavilions named the study, dressing, interior, embroidery, and protecting pavilions. There were wings to each of the buildings [enclosing the courts between them], which contained a number of suites of two rooms each. Behind the third hall, there were five buildings on each side [of the court], all of one story. Each pavilion contained three suites of two rooms each. In these side buildings [behind the third hall] dwelt the eight concubines [each of whom had a separate residence], four on each side. Each concubine had four young maidservants and a duenna. The last of these buildings on the left was the inner toilet, and that on the right was the inner kitchen. In front of the third hall [flanking the court] were also five buildings on each side. Each of these buildings had three suites of two rooms each, and all were of one story. Two buildings on the left were used for the outer kitchen, two housed male servants, and the last contained the stables. On the right side, two buildings were used for study and guest rooms, and two for the remaining male servants. One building was used for the family gods, what are called the *Ou-ao* of the southwest of the house.<sup>24</sup> Outside the third hall was the house gate. It was always locked, and the key was kept in the chief's yamen. If the gate were to be opened, a courier was sent to the yamen for it. At the side was a hole, about a foot and a half wide. A pulley was used for the conveyance of food and drink. On both sides of the gate were lanes separating the outer and inner houses. In the lanes were bronze vessels big enough to hold ten hundredweight [of grain]. Water was conducted to them from the mountain streams by bamboo pipes, and from there distributed to the different buildings. At the rear of the protecting-pavilion there was an open space of five or six *mon*. Half of it was planted with bamboo and excavated for a pond in which the washing was done, and half of it was left open for drying clothes. It was encircled by stone walls several tens of feet high. About ten feet beyond the wall were cliffs.

The lumber used in these buildings came from the south seas. Most of it

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<sup>24</sup> Compare with the saying quoted in the *Analecks*, III, 13, 1: "It is better to pay court to the furnace than to the southwest corner." The meaning is that the spirit of the furnace is the more important divinity.

was pear,<sup>25</sup> sandal-wood<sup>26</sup> and silk-worm oak.<sup>27</sup> The floors were covered with brick tiles, so it was not wet in the summer nor cold in the winter. When the residence was completed, a great deal of money had been spent.

The region occupied by these aborigines produced much metal and precious stones during the Ming period, and the chiefs became very rich. During the time of peace, heaven was not niggardly in giving good omens, and the earth was not niggardly in giving out its treasures. During these last years, the people have become greatly impoverished.<sup>28</sup> I lived there during the time of their decline, sharing what was left from the days of prosperity. Even this was so good that one can easily imagine their riches when they were flourishing.

About thirty *li* from my residence and over a steep mountain, there was a water-way to the south seas, Anam, and the southwestern countries. Therefore the utensils they used were mostly of red sandal-wood,<sup>29</sup> rose-wood,<sup>30</sup> *fen-chieh*,<sup>31</sup> Gharu-wood,<sup>32</sup> and benzoin.<sup>33</sup>

The women wore short upper garments reaching only to the waist, and long skirts. These skirts were of a hundred or two hundred folds. Rich women wore five of these skirts, while even the poor wore three. Men dress about the same. The underclothes and trousers were made of coarse hempen cloth, both for summer and winter. Unmarried girls do not take off their underwear at night, and never bathe before marriage. After marriage they bathe every day, and after the bath they are anointed with liquid storax.<sup>34</sup> Poor girls anoint their bodies with sheep's lard. This is why their skin is so tender, like congealed ointment.

The [girls'] underwear, stockings, and trousers were fastened together by hundreds of buttons. The buttons were round and flat, and those worn by the poor were made of lead and tin. This underwear was taken off only on the wedding night, and soon afterward was put on again. It was discarded only when the first child was born. The girls of the Shan,<sup>35</sup> the Ku-

<sup>25</sup> (22). *Pyrus sinensis* (Giles, Chinese-English Dictionary, No. 6888).

<sup>26</sup> (23). *Dalbergia hupeana* (*ibid.*, No. 10,706). Usually followed by (24).

<sup>27</sup> (25). *Cudrania triloba* (*ibid.*, No. 562). A thorny tree about fifteen feet in height.

<sup>28</sup> During the early stages of the Manchu conquest, but before the rebellion of Wu San-kuei.

<sup>29</sup> (26). A red-brown variety of sandal-wood (Giles, No. 10,706).

<sup>30</sup> (27). *Ibid.*, No. 6888.

<sup>31</sup> (28). The author has not been able to identify this wood.

<sup>32</sup> (29). Hirth and Rockhill, *Chau Ju-kua*, p. 204. T'ang mistakenly translates these terms separately.

<sup>33</sup> (30). *Ibid.*, p. 201.

<sup>34</sup> (31). *Ibid.*, p. 200.

<sup>35</sup> (32).

yang Miao,<sup>36</sup> the Huang-mao K'ao-lao,<sup>37</sup> the White and Black Lolo,<sup>38</sup> who paired with boys at the moon-dancing, never wear trousers.

At the moon-dances,<sup>39</sup> on the night of the full moon, a sign was set up in an open place, to gather together a crowd of the marriageable boys and girls. The boys led, blowing reed pipes, and the girls followed, playing metal bells. They danced to and fro, and sang to each other. If a girl and a boy liked each other, they ran together into the bush. The next day the man accompanied the girl to her mother's home, and then sent a match-maker to ask the price for marrying her daughter. When the marriage was performed, the boy always came to the girl, and the girl went to her husband's home only after the first child was born.

According to the Chou custom, during the last month of spring the marriageable boys and girls were gathered together, and it was not forbidden for them to run away in couples. But those who were not of marriageable age were forbidden to run away with each other. Now these five tribes of the Miao pair off whether they are of marriageable age or not. This is a degenerated practice.

The daughters of the chiefs sometimes bind their feet, but the girls of ordinary families seldom do it, because it is more convenient to work with natural feet. The way they make their feet small is very simple. On the mountains there is a kind of grass called *wei-ling-hsien*.<sup>40</sup> They dig up the roots and boil them, using the water to wash their feet. In a few days their feet become smaller.

There are many tribes of the Miao, and their customs differ from each other. So with their marriage ceremonies. The Sung, Tsai, Lo, Lung, and Feng clans have the most elaborate weddings, and are the best. [At the wedding] they do not use music. Music is not used until three months later, when the bride is presented in the hall of the ancestors. At this time they gather together all the relatives. The bridegroom presents to the elder relatives spotted bamboo chopsticks and pheasant feather fans as gifts. The elder relatives give to the bridegroom cinnabar,<sup>41</sup> *shih-ch'ing*,<sup>42</sup> cattle,

<sup>36</sup> (33).

<sup>37</sup> (34).

<sup>38</sup> (35); (36). T'ang endeavors to identify these tribes (T'oung Pao 6. 593-94, notes).

<sup>39</sup> T'ang has an excellent note on the moon dances (*ibid.*, 596-97). Compare also the accounts of mating dances among the ancient Chinese given by Granet, *Fêtes et Chansons Anciennes de la Chine*, Part II, and Appendix III.

<sup>40</sup> (37).

<sup>41</sup> (38).

<sup>42</sup> (39). Apparently a green stone. Giles (No. 9964) translates the expression as "dark green." When the order of the words is reversed, the phrase means "granite."

horses, and dogs or pigs in return. The bride offers the elders dates, chestnuts, and [branches from] filbert and pine trees, as guest gifts. The elders give her in return handkerchiefs, native brocade, gold, precious stones, hair-pins, and earrings. This is the ancient custom of these four clans.

When I married, the ceremony was a mixture of Chinese and Miao rituals. Among the musical instruments used were the bronze drums of the Miao. During the ceremony of meeting the bride, there were used a hundred pairs of red gauze lanterns, a hundred bamboo torches, and thousands of firecrackers. The sedan chair had blue coverings. I had my father's insignia carried before me. I used a goat, cow, pig and dog, all painted with colors, two jars of wine, and a hundred strings of cash as largess to the door-keepers. Everything needed in these ceremonies was a forced contribution from the subordinate Miao tribes.

On reaching the yamen, the music played seven times, and the cannon fired seven salutes. The gate was opened, and my father-in-law, in full ceremonial attire, stood on the eastern steps. He saluted the bridegroom and the masters of ceremonies,<sup>43</sup> and ushered them in. All the masters of ceremonies were well-known members of the literati, and were well trained in the ceremonies.

The groom and the masters entered by the right side and saluted twice at the lower end of the hall. The masters led the groom up the hall and spread the seats [mats] facing south. They requested the father-in-law to be seated, but he refused ceremoniously. The groom prostrated himself eight times, and the father-in-law, four times in return. Then the groom came down from the hall, offered the ceremonial wild goose and presents, setting them forth. After saluting twice, the groom and the masters sat down facing east, while the father-in-law, facing north, served cassia-bud soup<sup>44</sup> three times, bowing six times. The masters led the groom to the second hall, the cannon were fired three times, and the musicians played. A curtain was let down. The masters sang the eulogies three times, and requested the mother-in-law to enter. After a time she came out, accompanied by her maids, and sat behind the curtain. The groom prostrated himself eight times in front of the curtain, and she prostrated herself four times behind it in return. She ordered the groom to sit outside the curtain, and served him plum flower soup three times.

Then an old woman dressed in deep red came out from behind the curtain, tied a piece of soft red gauze about ten feet long to the waist of the

<sup>43</sup> (40)

<sup>44</sup> (41) T'ang identifies kuei-tzu with (42), lungan fruit (T'oung Pao 6. 601, note 2; Giles, No. 6435).

groom, and led him behind the curtain. The masters were not allowed to go in. The mother-in-law led the groom to the third hall, where he saluted all the concubines [of the father-in-law] twice. They all replied in the same way. The groom sat facing south, the mother-in-law sat facing west, and the concubines sat a step behind her. They served rose soup three times. Then they served date-chestnut-lotus-seed soup three times. After every serving all bowed twice. After this the groom rose, prostrated himself twice, and thanked the mother-in-law. When leaving, she gave a pair of gold and a pair of jade cups, twenty pairs of gold enameled ivory chopsticks, to each one a pair of gold and silver paper-weights,<sup>45</sup> *fang ch'uan*,<sup>46</sup> two bars of gold and two ingots of silver. She ordered the old woman to conduct me back to the grand hall. Then we sat down to feast, and watched a theatrical performance. After three cups of wine, we left the feast and changed our clothes. When we returned to the feast, the heavy dishes were served. After three servings of wine, we left the table again and resumed our official dress.

Then the masters led the groom down the hall, prostrated twice, and thanked the father-in-law. The father-in-law gave twelve bundles each of satin, *sha pu* [a light Chinese cloth], damask, and gauze, twelve ingots of gold, two jade bowls, and two antique censers as presents. The groom prostrated himself twice, and thanked him. The masters led the groom from the second hall to the third hall, and then through the study rooms to the ladies' dressing room. On passing through each door, the masters were obliged to chant the proper ceremonial phrases and prostrate themselves twice. They called it "worshipping the door." The Miao women purposely led us through as many doors as possible in order to ridicule the groom. Then the masters retired. The father-in-law led the groom to the mother-in-law, and the groom bowed and prostrated twice. He did the same to all his father-in-law's concubines. Then they led the groom to the middle hall, where he stood facing the north while Miao music was played by young girls. These girl musicians were dressed in deep red, and played on the *Ch'u-kuo* bronze drums. They danced to and fro and sang the Miao songs, which are very sweet.

After a while an old woman dressed in deep red tied a red thread to the left arm of the groom, and took the thread to the inner room, where she tied [the other end] to the right arm of the bride. Then she led the bride out, her head covered by a veil, and stood her beside the groom. The bride

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<sup>45</sup> (43)

<sup>46</sup> (44) Square frames used in teaching Chinese children to write.

and groom prostrated themselves eight times before the tablets of the ancestors, to each other, and to the bride's parents. After this they sat down, the bride's parents facing north, and all the father-in-law's concubines attending. The bride and groom sat together facing the east. Then the old woman removed the veil from the bride's head and exposed her face to the groom. The attending concubines whispered to each other in the Miao language and praised the bride, as if saying that their daughter was quite worthy of the groom. They were all served by attending maids. After this, the father-in-law led the bride and groom out of the ladies' dressing room, through the study, to the second hall. The old woman untied the thread from the groom's arm and led the bride back. This old woman was the female master of ceremonies.

Then the masters of ceremonies were called in, and put on a costume of Miao brocade. They danced, beat the Miao drums, sang the native songs, and finally requested the bride to enter her carriage. When it came in, the whole family wept. The concubines brought the bride to the carriage, and all wept when she entered it. The bronze drums were beaten and the reed pipes blown when the bride left. The cannon were fired outside. The central gate was opened. The father-in-law accompanied the groom to the outer hall and bowed three times. Then the groom rode home, to the accompaniment of music.

After a while the bride's carriage arrived [at the groom's home]. The female relatives [of the groom] set up an altar outside the first gate, and burned paper money while sending the family gods away. After this they led the bride's carriage into the study. The masters sang the eulogies three times, and requested the bride to come out. The female master of ceremonies held the key, opened the door of the carriage, and taking the red thread tied to the right arm of the bride, gave it to the groom. Then he led the bride out of the carriage, while the maidservants helped the bridesmaids out of their carriages. They all crowded round the bride and led her to the nuptial chamber. The masters stood in the middle hall and sang the ceremonial sentences. The groom and bride prostrated themselves to each other, and the bridesmaids followed the bride in all the ceremonies. We did not sit on the bed, but we sat on the ground and drank the nuptial cup. The bridesmaids sat in one row like geese. The groom and bride drank once, and then passed [the cup] to the bridesmaids. After this the masters beat the bronze drums and sang the wedding songs. They threw red beans at the couple as a blessing to bring many sons.

After the music had stopped, the masters asked the groom to take the bridesmaids to their respective rooms. Then the groom and the bridesmaids

came out of the bride's room. The old woman closed the door and helped change the bride's dress. She brought perfumed water, and the bride bathed three times. The masters led the groom first to the right and placed the first bridesmaid there, while music was played. The Miao custom regards the right side as the side of honor, so we started from the right. Maid servants attended the bridesmaids during their interview with the groom. The groom sat to receive two prostrations, and he knelt twice in return. The duenna gave wine to the bridesmaid, and she offered it to the groom. He drank half and she drank half, kneeling to finish it. Then she rose and bowed four times, and the maidservants led her behind a curtain.

The master then led the groom to place the second bridesmaid in the same way as the first. When the four on the west were finished, the four on the east were placed in the same way. Then the masters led the groom back to the bride's room to change his clothes. The masters retired. The bride came out to welcome him, bowing to him four times, and he replied in the same way. Then they went behind the embroidered curtain hand in hand. After the bridesmaids had bathed and changed their clothes, they all came behind the curtain and bowed four times to the bride and groom. When the bride and groom had replied to their salutations, they retired to their own rooms.

At cock-crow all the bridesmaids rose and dressed. They came to the bride's bedroom to offer tea, and to congratulate her. While the bride was dressing, they accompanied the groom to the door of his mother's room, where they offered tea. The groom's mother received the tea [through a servant], but refused to see them. She ordered a maid to bid them go back. Then the groom, bride, and the bridesmaids knelt twice before the door and retired.

After this, the groom attired in full official dress, rode to his father-in-law's yamen to thank him. First he thanked the father-in-law in the great hall, and then the mother-in-law in the second hall. She detained him and feasted him. At the feast were the bride's sisters, cousins, aunts, and other female relatives. There were hundreds of them. After the feast he returned home. At sunset, the bride and groom, followed by the bridesmaids, offered wine and fruits to the groom's mother, but she declined to accept them. They knelt as before, and then returned. This was repeated on five successive days. On the sixth day, a banquet was held in the rear hall, with music. The bride and groom worshipped heaven and earth, the family gods, and the kitchen gods. Then they paid their respects to the groom's mother, female relatives, and his younger sisters. The bridesmaids followed the bride during these ceremonies.



The table facing the south was occupied by the bride, eight tables facing east by the bridesmaids, four tables facing west by the female relatives, and the table facing the northwest was occupied by the groom's mother and younger sisters, the hostesses. The groom's mother presented the wine cups and chopsticks to the bride, which she refused as if she did not dare to accept them. The groom's younger sisters acted for their mother during the ceremony. The bride kneeled to offer wine and chopsticks to the groom's mother, the relatives, and the sisters. After drinking three cups of wine, there was an intermission, and all retired to change their gowns. Then they returned to the table, and after three cups of wine, the bride and the bridesmaids went to the hall and thanked [everyone]. They followed the groom's mother to her chamber, where they arranged her bed, curtains, clothes, ornaments, and prepared washing utensils. They attended her until she went to bed, and then they retired. At cock-crow the next morning the bride rose and dressed, and with the bridesmaids waited outside the chamber of the groom's mother. They were obliged to wait silently until she waked. As soon as she awakened, the bride called to the maids within to open the door, and she entered to assist her mother-in-law in dressing. She retired only after breakfast had been served. The bride and bridesmaids also attended her at luncheon. Every day the bride sent a bridesmaid to serve her [husband's mother], and to do all the cleaning and other household work. The bridesmaid could retire only when the groom's mother went to bed. She was served like this every day. If the bridesmaid on duty was sick, she must ask for leave, and another was ordered to take her place.

After three months, the tablets of three generations were set up. The bride and groom, followed by the bridesmaids, worshipped there as if it were a personal interview. A great feast was arranged. The male relatives and guests feasted in the great hall, while the female relatives and guests feasted in the second hall. The bride and groom offered ceremonial gifts to all the elders, and the elders gave presents in return. This ceremony marked the final acceptance of the bride as wife.

When I was young, I was rather timid. I had often heard my maternal uncle, Ch'ien Po-k'o, say that while the Miao customs were very loose in matters relating to sex, the Tsai, Sung, Lung, Lo, and Feng clans were very strict about these things. Even their own sons were summarily dealt with if they were found guilty of having had sexual relations with relatives, or with their servants' wives and daughters, and were never pardoned. I was very much frightened. From that time, I dared not even look straight at pretty Miao girls whom I met.

When I took my first degree in the competitive examinations, I went to see the grand-examiner Yen. He asked, "How old are you?"

"I am sixteen," I replied.

The assistant grand-examiner Shen asked me, "Are you married or engaged?" I blushed, and could not answer a word.

My friend Hsian Wang-hui, who passed his examinations at the same time as I, replied for me and said, "I think, not yet."

Mr Shen said, "Why still so bashful? If you are not engaged, I will be your matchmaker, provided you are successful in your examinations at the capital." I was so embarrassed that I could not answer a word.

During my wedding ceremonies, I simply followed the masters of ceremonies. When they said "Bow," I bowed, and when they said "Kneel," I kneeled. When I came to the ceremony of placing the bridesmaids in their rooms, I thought that they were merely girls accompanying the bride, and that as I was the host, the masters led me to give them rooms to stay in. When they offered wine to me, I thought they were people of my father-in-law's family, and that this was just a matter of courtesy to the bridegroom.

Later, I saw them serving my mother with my wife, and I gradually understood that they were attending maids. At the same time I saw them sit with my wife, as if they were not slave girls. But whenever they saw me, they always rose as if attending me, and never dared to sit before me.

My wife and I could not understand each other. My wife understood the Chinese language, but she could not speak it. Although she understood me, I could not understand her. I had no way of asking, and no means of knowing, what kind of girls they were. All this was due to my seclusion in this mountainous region, whereby I was limited in my knowledge at that time. I had no intimate friends to tell me their customs and usages, and as I was seldom home, I could not understand their language. I had a maternal uncle, but he was so dignified and stern that I dared not ask him about such matters. My mother also was very severe in such things, so I dared not ask her, for it would have been very embarrassing. She did not understand the Miao language, and there was no way for her to tell me. I had a cousin, the daughter of my maternal uncle. She was young, but very clever. Not being of my clan, she retired whenever she saw me [because the two young people might have married, having different surnames]. Moreover, I was so frightened by my uncle's saying that even one's own sons would be killed if they were found guilty of illicit intercourse, that when I saw the bridesmaids, I always treated them as guests, and dared not be familiar.

At first, my mother-in-law came to my house once a month. After three

months, she came several times a month. Whenever she came, she stared at my wife's eyes and eye-brows, and also at mine. Often she whispered with the matron. I could not understand what they were talking about, but I guessed that they thought I had not had sexual intercourse with my wife. From time to time, she spoke to my wife secretly. My wife blushed, and did not reply. They all went away stamping their feet in despair. I saw this, and I was much troubled by it. My mother also was surprised. She asked me [what they had said], but I answered, "I do not know either." She was troubled and worried, but the only thing she could do was sigh. One day my mother-in-law came again and spoke to my wife secretly. When my wife did not reply, she wept. Then my wife, compelled by the situation, whispered a few words to her. She became glad, and went away after patting my back several times.

Formerly when my mother-in-law talked constantly with the matron in secret, my younger sister, who was attending my mother, heard all their talk. She had been among the Miao for two years and knew their language, so that she understood what the subject of their conversations was. When my mother saw my mother-in-law unhappy several times, she was much worried. My younger sister said, "Do not worry. There is nothing. I know that." She did not tell my mother what it was, because it would have been embarrassing for her to say such things. But my mother became still more worried, and I myself more troubled about these things.

Half a year later, my wife and I could understand each other. I could understand the Miao language now, and my wife and the bridesmaids had all learned from my masters and could read and speak Chinese. So I asked my wife why her mother spoke secretly, stamped her feet and wept, and what it was all about. My wife told me the reasons, which were what I had conjectured.

The matron was an elderly virtuous widow, a relation of the Lung family. She was engaged to take care of the whole household, and all must do as she ordered. She was versed in the P'o language.<sup>47</sup> Everything that occurred in the household was recorded and reported to my mother and father-in-law. She was very stern and dignified. If my wife, the bridesmaids, or the maid servants did not act properly, she would give a reprimand. If the offense were light, she would slap the offender; if serious, she would beat her with a stick. They trembled with fear when they saw her.

One evening my mother-in-law gave a feast in my residence, and arranged a wedding in the lower rooms. Curtains and beds with rich furnish-

<sup>47</sup> (45). Identified with the Shan language (W. F. K. Muller, *T'oung Pao* 3: 17; 6: 581 note 1).

ings were set up there. She ordered the bridesmaid Lan-fang to be richly dressed and brought out to pay respect to my mother, then to my wife and to me, then to the matron and others, and lastly, to my mother-in-law. She offered three cups of wine to each person, and after that she returned to the lower chamber. My wife, guided by two lighted candles, conducted me to sleep in the lower chamber.

I asked her, "What are you doing?"

My wife replied, "It is the custom of our family that when daughters have been married for half a year, and have not conceived, we must allow a concubine to attend you in hope of having a son. I have been your wife without result for six months. Sister Lan is the oldest, and she ought to attend you first. This is the reason my mother gave her a wedding feast. According to our custom, when a man marries, everyone expects a son to be born to him within a year; otherwise his children will be few. My mother was worried because I did not conceive."

Now I understood what they were doing, and I slept in the lower chamber. At cock-crow, the matron commanded the concubine to return to her own room. My wife also rose at this time and dressed. After a while all the concubines assembled, and she led them to my mother's room to pay their respects. They attended her while she dressed and breakfasted, and then retired. She urged me to go to my mother-in-law to thank and salute her. From that time, Lan attended my bed every third night, and returned to her own room at cock-crow. This is the custom mentioned in the Odes,<sup>48</sup> "Under the stars we come and return."

For another two months, Lan did not conceive. My mother-in-law sent a wedding feast as before, and sent Chen-ku to attend my bed. After a month my wife conceived, and Lan and Chen also conceived. The matron did not allow them to attend my bed any longer, for the Miao have a strict prohibition concerning this. The Miao babies are very susceptible to smallpox, which is severe with the adults also. The only way to secure immunity from smallpox is for a pregnant woman to avoid her husband. Then the child born will never catch the disease. So in a wealthy family there is a matron who takes care of such matters. In the poorer families, the husband's mother guards this matter strictly.

When a woman conceived [they thought], it could easily be recognized. If she conceived one night, the following morning there would be a thread of red vaguely visible among her eyebrows. The ladies of the higher families must salute the matron every morning, and the matron when she sees the

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<sup>48</sup> (46). Book of Odes, Kuo fang, Book II, Ode 10.

sign will say to her, "You have conceived; do not stay longer with your husband." She immediately removes her bed to another room, and locks her door on the inside every night. The matron protects her day and night until the seventh month, when the pregnant womb is matured. Then the most stringent measures are relaxed. Such measures do not concern one man or one family only.

My mother-in-law was glad when she heard that the three women had conceived. Then she sent weddingfeasts successively to the other concubines, Cheng-chung, Wan-hsiang, Hui-hsueh, An-chieh, Jui-chou, and Ch'ung-t'ien. They all attended my bed in turn. Of these eight concubines, half belonged to the clan of my wife, and half were selected from well-to-do families. According to their ages, my wife came exactly in the middle. The eldest was four years older than my wife, and the youngest four years younger, there being a difference of one year between their successive ages. This was also according to the Chou practice. They all wore similar costumes. My wife had one more gold necklace than the others, and bracelets of engraved gold. The bracelets of the others were of plain gold.

Wan-hsiang was the daughter of a freeman. She was a year older than my wife, and was born in the same month, day, and hour. Their voices and appearance were exactly alike, except that Wan-hsiang's hair was a little shorter. Although my wife and I could understand each other half a year after our marriage, often I could not distinguish between the two women. Frequently when I saw Wan-hsiang come in, I treated her as my wife. She always demurred, saying, "I am not the mistress; I hope you will respect yourself." This happened on several occasions. Of course the other persons in the room laughed at us. Even my mother often mistook her for my wife because the two were so alike.

Once my wife played a joke on me. She put her necklace on Wan-hsiang, and told her to go into our bed-room. At that time I was sitting on the bed, and I thought it was my wife, so I tried to make her sit down beside me, but she avoided me and ran out. I was quite surprised that she acted so differently from her usual manner. After a while my wife came in without her necklace. I thought she was Wan-hsiang and asked, "Where is the mistress?"

My wife replied, "Who is the mistress?" and then sat beside me on the bed.

I was surprised at the rudeness of Wan-hsiang, because concubines should never dare to sit beside their master. After a while, Wan-hsiang came in, took off her necklace and put it around my wife's neck. She looked at me and said, "I give back your mistress." The whole room laughed. As

one old proverb says, "The different types of the heart are like different faces;" which means that no two faces are exactly alike. But there are faces which closely resemble each other, like those of Confucius and Yang Ho.

The Miao girls seem much alike. I often saw pairs and pairs, when there seemed no difference between them. Not only do sisters and near relatives resemble each other, but even sisters-in-law and those more than a hundred *li* apart are alike. I think it is due to environment, because in the territory occupied by the Miao, the mountains and cliffs often resemble each other. So the human countenances of those born in these similar environments are alike.

My wife often said to me, "I shall die when I have reached the age of seventeen. The one who succeeds me as your wife should be Wan-hsiang. I hope you will treat her well. Being good to her will be the same as being good to me."

I was quite puzzled, and asked her why.

She replied, "I have often dreamed of visiting a magnificent palace, where a Taoist nun led me to the female immortal Yü-cheng.<sup>49</sup> The goddess was clad in richly embroidered garments, and sat facing the south. I worshipped in the hall. A female official beside her pointed to me with her tablet and said, 'This girl is clever, and also has immortal affinity.'<sup>50</sup> We can keep her to wait upon the goddess.' But the goddess answered, 'She is too young. Let her reach the age of seventeen, and learn to read Chinese books.' She took me out, and I returned to my room. I saw a girl occupying my bed. I hooted at her, and then I woke up in astonishment. Later my father selected my maids, and obtained Wan-hsiang. As soon as I saw her, I recognized her as the one who occupied my bed in my dream. Who dared to occupy my bed! So the one who succeeds me as your wife must be Wan-hsiang. Formerly I did not know what they meant by Chinese books. Now I have learned the *Analects* and the *Book of Filial Piety* from my mother-in-law. If these are not Chinese books, what are? Therefore I know that I must die at seventeen."

When I heard her words, I was grieved. But it was only a dream, so how could it be real? Later she really died at seventeen. Not half a year later Wan-hsiang also died. I married again, from the Ch'ien family. The idea that Wan-hsiang would succeed her as my wife was not correct. I think [the mistake] may have been due to the resemblance of my wife to

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<sup>49</sup> (47).

<sup>50</sup> (48).

Wan-hsiang. In her dream, my wife's soul came in from the outside, and saw someone occupying her bed. It was really her own body, not Wan-hsiang. She did not recognize her own corporal body, and hooted at it. And it happened that Wan-hsiang resembled her in appearance, so she thought that Wan-hsiang would succeed her. But Wan-hsiang never fulfilled the prophecy.

The matron made regulations concerning the concubines. They were not allowed to lie down in unusual positions. When they lay down, they were covered with quilts and embroidered spreads. The four corners of each spread were weighted by bronze animals two or three catties in weight, as if to prevent the person from turning. After going to bed, they were not allowed to rise again to relieve themselves. Outside the curtain, a light burned all night. Every night a young maid servant was ordered to attend them. The matron went secretly to make sure. If she heard any snoring, she went in, caught the snorer by the hair, and beat her. Even the servants were not allowed to snore.

Every night after the second drum had been struck, they went to bed. At cock-crow, the matron beat the bronze board seven times, and the maid servants in the various rooms also beat bronze boards in reply. They called the concubines to rise and dress. After dressing, they assembled in the wife's chamber and helped her to dress. When this was finished, they went together to salute their mother-in-law.

Those who were pregnant, if they did not stand upright or sit straight, or if they lay down in an extended or improper position, or if they drank too much wine, or ate too much, were warned by the matron.

The concubines often sat together with the wife, or talked and played games with her, but they never dared to sit in the presence of the husband. In his presence they attended standing the whole day, and dared not feel tired. All this was due to the strict rule of the matron. In the whole house, there was never any shouting or wrangling. The maid servants stood rigidly to the right and left and held their breath, like soldiers. If the husband wished to sit with the concubines, it must be on their beds. If they sat together in chairs, the matron would punish the concubine. If the concubine angered the husband, the matron would compel the concubine to take down her lower clothes and would beat her. They were never pardoned for offending the husband.

When they served the husband's mother in such ways as cleaning toilet utensils, washing clothes, making dresses and shoes, arranging the bedding, and attending at meals, those who had sons did it consecutively for three days, those who had daughters for two days, and those without children

only one day. They did it by turn, and no one dared to confuse the order. All this was supervised by the matron, and even my wife dared not ask a maid to act in her place. If they were pregnant or sick, they were obliged to ask for an excuse so that some other might take their place. After childbirth and recovery from sickness, they must enter upon their duties again. It was really the practice of the three dynasties, long disused in China, but unexpectedly preserved on the frontiers. An old proverb says, "When ceremony has been lost, seek it among the uncultivated."<sup>51</sup> Now we cannot find it among the uncultivated, but among the Miao. It is really deplorable!

All that my mother needed was cared for by my wife, and each concubine had her special duty. If one thing was not ready, or one thing not done well, it was the shame of the one who was in charge. Alas, the Miao barbarians have *li*,<sup>52</sup> while the Chinese have lost it.

The prosperity of the Lung family began under the Han dynasty and has lasted until the present. The means by which it was kept were not strong armor nor sharp weapons. They depended upon virtue. Since their daughters can perform a wife's duty like this, the excellence of their family education may be inferred. If a daughter performs a wife's duty, and a son, a man's duty, then virtue is attained. Why worry lest your prosperity may not last? At present, Chinese scholars indulge in vain hopes that their prosperity may endure, but do not seek for it in filial piety and fraternity. They worship the heretic Buddha, and regard the chanting of Sutras, the giving of alms to monks, and the setting up of images, as good conduct. Alas!

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<sup>51</sup> (49).

<sup>52</sup> (50). Correct behavior.



THE people conventionally reckoned as Southern Paiute belong, together with the Ute, Chemehuevi, and Kawaiisu, to the Ute-Chemehuevi branch of Plateau Shoshonean.<sup>2</sup> Within this division, the linguistic relationship is quite close,<sup>3</sup> so close in fact that the northern and eastern Paiute do not distinguish sharply between themselves and the Ute except on cultural grounds. Thus, "The Ute wear their hair in two braids;" or "The Ute know everything. They know the Bear dance and the Sun dance. They know how to make buckskin dresses and gloves and how to make beadwork." The emphasis, it may be noted, is on Plains traits.

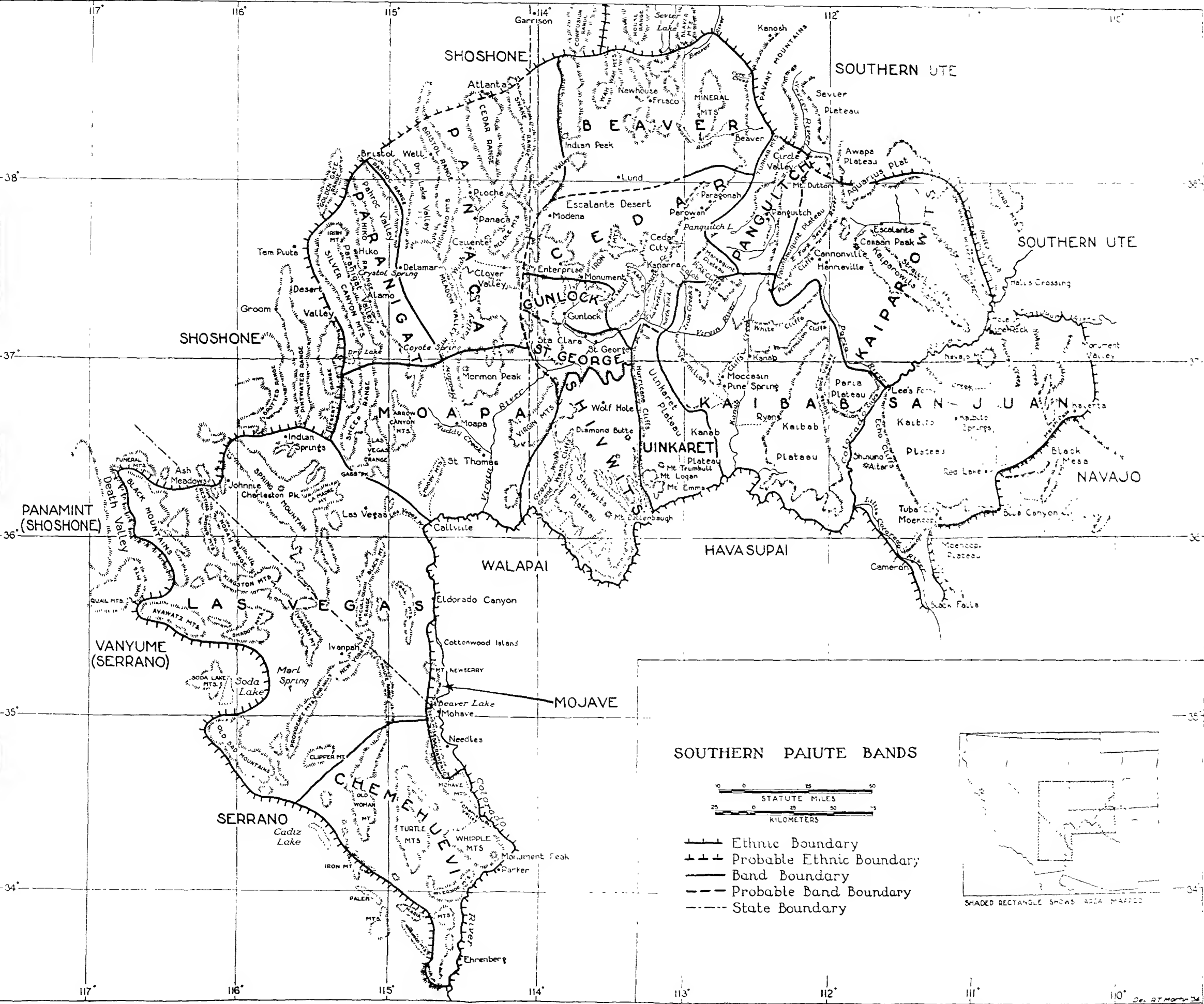
A Paiute-Ute confusion is furthered by the fact that "Paiute" has little if any meaning to the people so designated. Although Sapir (p. 610) was told that payu'-tsi- meant "those who return by the same way they have gone," he regards this as a folk-etymology; and my informants thought that Paiute must be a "Mormon" word. In any case, the Paiute accept the nomenclature that has been imposed upon them but are uncertain of its application. They call themselves nīḡwīn, nīwī, or variants thereof, meaning person (people). This is a term of elastic connotation which seems sometimes to be applied to fellow members of a local band, sometimes to any group of related speech, sometimes to Indian generically.

As the Paiute to the north and east merge with the Ute, so those to the west fuse with the Chemehuevi, only to an even more marked degree. In fact, the Southern Paiute and Chemehuevi merge so inextricably in language and culture that any separation of the two would be highly artificial. It seems very likely that from the Ute on the northeast to the Chemehuevi on the southwest, there is an unbroken series of closely related dialectic

<sup>1</sup> The material for this paper was gathered during a two-year period (July, 1932 to June, 1934) as a National Research Fellow in the Biological Sciences. Of these two years approximately eleven months were spent in the field. During the first year field funds were provided half by the University of California and half by the Laboratory of Anthropology and the American Museum of Natural History, and during the second year, two-thirds by the University of California and one-third by the Laboratory of Anthropology. The objective was an ethnogeographic study of the Southern Paiute, but the accumulated data were so rich in general ethnography as well that several years will be required to prepare them for publication. In the meantime the accompanying map and brief text on boundary material alone are presented so that at least the location of the Southern Paiute may be recorded without delay.

<sup>2</sup> A. L. Kroeber, *Shoshonean Dialects of California*, UC-PAAE 4: 105, 1907.

<sup>3</sup> According to Sapir, "It is doubtful if even the geographically extreme Ute-Chemehuevi dialects, say Uncompahgre Ute and Chemehuevi, are not mutually intelligible with considerable ease" (E. Sapir, *The Southern Paiute Language*, *Proc. Am. Acad. Arts and Sci.* 65: 5, 1930: cited as Sapir).



Erratum For Pine Spring in Kaibab territory read Pipe Spring



units whose ethnic intergradation has been obscured at the one extreme by a Plains veneer and at the other by a Mohave. The geographically middle groups, whose culture is relatively less embellished are those ordinarily designated as Southern Paiute. The intergradation of this whole series of tribes within the Ute-Chemehuevi division cannot be confirmed or denied without evidence from the Ute and Kawaiisu; but field work the past year among the Chemehuevi has demonstrated quite conclusively that they, at least, are essentially one with the Paiute. In this paper the term Southern Paiute will be understood to include the Chemehuevi.

The accompanying map indicates as nearly as I could determine the territorial extent of the combined Southern Paiute and Chemehuevi about the middle of the last century.<sup>4</sup> The area lies north and west of the Colorado, in the form of a huge arc which encircles the great bend of the river. From the mouth of the San Juan, the Paiute extended westward through southern Utah, the Arizona strip, southern Nevada, into southern California to within fifty miles of the mouth of the Gila. East and south of the Colorado there was but one Paiute group, between the lower waters of the San Juan and the Little Colorado.

This area, roughly 350 miles east and west, falls into two physiographic provinces, the Colorado Plateaus and the Basin and Range. The Plateaus consist of a series of elevated tablelands, those above 7000 feet receiving precipitation adequate for the support of a fairly dense coniferous forest. The middle elevations (5-7000 feet) are characterized by open stands of piñon and juniper, while below this belt is desert upland with sage and other shrubs. The break between the Plateau country and the Basin and Range is marked by the imposing Hurricane Fault ledge and the Grand Wash cliffs, to the west of which lies the lower Basin country with its alternate valleys and ranges trending, for the most part, north and south. The Basin ranges are low and seldom reach an elevation above the piñon-juniper belt; in the northern part of the area the Basin valleys are sagebrush desert, in the southern part, creosote bush desert. The area as a whole is arid, and aside from the Colorado, there are no perennial streams

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<sup>4</sup> The base map has been compiled from the available U. S. G. S. topographical sheets, from the topographical map of Arizona published by the U. S. G. S. and the Arizona Bureau of Mines, and from maps contained in the two following publications: H. E. Gregory and R. C. Moore, *The Kaiparowits Region*, U. S. Geol. Survey, Prof. Pap. 164, 1931; W. C. Mendenhall, *Some Desert Watering Places in Southeastern California and Southwestern Nevada*, U. S. Geol. Survey, Water Sup. Pap. 224, 1909. Quadrangles for which there are no topographical maps (between longitudes 113° and 115°, latitude 38° to 39°, and longitudes 115° and 116°, latitude 37° to 38°) have of necessity been filled in from road maps.

save the Virgin system, the south fork of the Sevier, and possibly the Escalante river. This briefly is the Southern Paiute landscape.

Within this area the Southern Paiute are divided into fifteen sub-groups, bands, or tribes if you like, whose relationship is expressed thus, "They speak the same language but the voice sounds different." Essentially these are dialectic units with political concomitants. Of the fifteen bands, six lie wholly within the Plateaus, the others on the fringe or definitely within Basin and Range. Five of these groups—Kaibab, Uinkaret, Shivwits, Moapa, and Chemehuevi—have generally recognized names. For the others, names have been coined from key locations within the habitat. Native terminology has been avoided because in some cases it is lacking; in others it is overlapping or unwieldy.<sup>5</sup>

*San Juan.* The easternmost of the Paiute bands may be designated as San Juan, from the river of that name. This group is little known except through the Reports of the Commissioner of Indian Affairs, although there is perhaps general knowledge of the existence of a "Paiute Strip people." Their old habitat now is a part of the Western Navajo agency, under whose jurisdiction are the few remaining Paiute. These cling to an inaccessible district near Navajo mountain and eastward, along the canyons leading to the San Juan from the south. Prior to the Navajo incursion, which seems to have started in the eighteen-sixties,<sup>6</sup> these Paiute claimed the region between the Monument valley district, just east of Moonlight creek, and Black spring (falls?), above Cameron, on the Little Colorado. Black Mesa, which they regarded as Navajo, formed the eastern boundary, and uninhabited Moencopi plateau the southern.

*Kaiparowits.* Across the Colorado are the Kaiparowits, named from the

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<sup>5</sup> Today most of the Southern Paiute are grouped on four reservations: Kaibab, at Moccasin, Arizona, Shivwits, near Santa Clara, Utah, Moapa, near Moapa, Nevada; and Colorado River, at Parker, Arizona. A few also live on a small reservation at Indian Peak, northwest of Lund, Utah, and a few on the Western Navajo reservation. At Cedar City, Utah and at Las Vegas, Nevada, there are fair-sized Paiute camps, although no formal reservations. As a result of this modern grouping less than half the informants now live within the bounds of their original tracts.

On the whole informants are scarce. One band (Uinkaret) is entirely extinct and six others (Kaiparowits, Panguitch, St. George, Gunlock, Panaca, and Parangit) are represented by lone informants, if one excepts the completely incapacitated and the younger people who are uninformed. For three bands (Cedar, Beaver, and Moapa) there is practically no one of advanced age, although a number of middle-aged informants are obtainable, some adequate and some not. Each of the remaining bands (San Juan, Kaibab, Shivwits, Las Vegas, and Chemehuevi) is represented by at least two good informants.

<sup>6</sup> Katharine Bartlett, *Why the Navajos Came to Arizona*, Mus. Notes, Mus. of N. Ariz. 5: 31-32, 1932.

great plateau which bisects their country from northwest to southeast. Perhaps this group should be reckoned Ute rather than Paiute, as the one available informant, a middle-aged woman, asserted on alternate days that she was a Ute. But the Kaibab Paiute, among whom she has lived for many years, regarded her claim as an affectation born of vanity.

In any case, the Kaiparowits occupied the exceedingly rugged canyon lands between Waterpocket fold and the Paria river. To the north they were bounded by a fringe of the High Plateaus and to the south by the Colorado river. They held an arid, barren, deeply dissected district where subsistence for even a small non-agricultural population must have been an acute problem.

*Panguitch.* West of the Kaiparowits is a band conveniently labeled Panguitch, from the valley and lake of that name. Of this group there remains but one middle-aged woman, now living at Cedar City. According to her, Panguitch holdings included the upper Sevier drainage, from the Sevier-Virgin divide, north nearly to the junction of East and South forks, while the lateral boundaries followed the crests of the bordering plateaus. The Panguitch area is comparatively small, wholly within the Plateaus, and, in contrast to other Paiute habitats, remarkably well watered. Some Kaibab informants were inclined to consider the Panguitch "Ute" or "half-Ute," while others regarded them as "Paiute."

*Kaibab.* South of the Panguitch and southwest of the Kaiparowits are the Kaibab, relatively well known, in name at least, through Powell's reports. Their territory extended from the southern terminals of the high plateaus to the Grand canyon, and from Paria river and Marble gorge on the east to Uinkaret plateau on the west. Actually the western boundary reached the Colorado at a point just below the mouth of Kanab creek, therefore somewhat east of Uinkaret plateau.<sup>7</sup>

*Uinkaret.* To the west of the Kaibab are Powell's Uinkaret. Today they are extinct, so far as I could determine, and boundaries have been assigned on evidence from adjacent bands. Their territory appears to have been pear-shaped, with its base along the Colorado, its apex just south of the west-flowing Virgin. The western bound is definitive: Whitmore wash and the prominent scarp of Hurricane cliffs. The eastern bound is less marked but skirted the Shinarump cliffs to project into Antelope valley, whence it continued south to the Colorado.

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<sup>7</sup> Dr Edward Sapir has very kindly loaned his manuscript material on the Kaibab. The boundaries here given agree with his except to the northwest, where his informant terminated Kaibab territory just north of the Virgin river, thereby excluding Zion creek and sections of Colob and Markagunt plateaus.

*Shivwits.* The Shivwits adjoin the Uinkaret on the west. Their boundaries followed the borders of Shivwits plateau except to the west, where they included the Grand wash district to the base of the Virgin mountains.

*St. George.* Immediately north of the Shivwits, in the environs of St. George, Utah, is a group which held a small section along the Virgin river and the lower waters of Santa Clara creek. Of this band there is but one survivor, now living among the Shivwits. According to him the eastern boundary followed a line drawn from the mouth of Harrisburg wash to a point just north of old Fort Pierce spring. To the west he placed the line along the crest of Beaver Dam mountains; but informants of the band next west attributed this whole range, as well as Beaver Dam wash, at its western base, to the St. George band. The map follows the latter evidence. The northern and southern limits of the St. George group were respectively the Vermilion cliffs and the scarp of Shivwits plateau.

*Gunlock.* While the St. George group occupied the lower Santa Clara creek, the upper waters were held by another small group, best termed Gunlock, the name of practically the only settlement within its limits. Like the preceding group, the Gunlock are represented by a lone survivor resident among the Shivwits.

The eastern boundary of the Gunlock was the crest of the imposing Pine Valley mountains; the western boundary was somewhat indeterminate but presumably was located in the highland country just west of Beaver Dam mountains. To the north a peculiar situation is encountered. As indicated on the map, my informant definitely placed the boundary just short of the Colorado-Great Basin divide, and for the area along the divide and immediately northward there were no claimants. This apparent evasiveness certainly is linked with the Mountain Meadow massacre, which took place in 1857 at the head of Magotsu creek, a tributary of the Santa Clara. Even after seventy-five years, Indians are apprehensive of assuming any responsibility for the region. As the map stands the controversial district is thrown more or less automatically into the territory of the Cedar band, but chances are about even that it should fall within Gunlock limits.<sup>9</sup>

<sup>9</sup> My Gunlock informant was vague but thought the people to the north were "Iuta," the name by which the Cedar band is known to several of its neighbors. On the other hand, Lowie (Notes on Shoshonean Ethnography, AMNH-AP 20, 193, 1924) was told that the "ma'tu'sats . . . used to live near Panaka, from Enterprise, Utah, northward." Enterprise is within the doubtful area, but even so the identification is not precise, because while the St. George called the Gunlock Ma'tu'sat', the Gunlock in turn applied Mat'sats to "people to the northwest, way over by Panaca." Although informants could not translate the term, the suggestion is that it means little more than "northerners."

The Wheeler report (George M. Wheeler, Preliminary Report upon a Reconnaissance

*Cedar.* The band immediately north of the Gunlock is the Cedar, centering in Cedar valley, Utah. Of this group I could locate but two informants: one, a middle-aged berdache originally from Paragonah valley but now at Cedar City; the other a very good woman informant, originally from Toquerville but for many years resident among the Kaibab.

The Cedar band straddled the dividing line between the Colorado Plateaus and the Great Basin, but its greatest extent was in Basin country. Its northern and western bounds, as shown on the map, are conjectural, owing largely to three factors: (1) lack of informants familiar with this particular section of the locale, (2) the presence of the great Escalante desert, which was unoccupied if not unclaimed, and (3) reluctance to admit knowledge of the Mountain Meadow country. However, in locating the northern boundary there are two definite guides: on the eastern extremity Cedar territory extended to the head of Paragonah valley, while on the western extremity Hamlin valley is claimed by the neighboring Panaca.

The southern end of Cedar valley is closed by a ridge which forms a more or less natural bound; but curiously enough, the Cedar claimed a pocket like extension to the south, along the Virgin river, from above North creek to the mouth of Harrisburg wash, including the several tributaries of the Virgin—North, La Verkin, and Ash creeks. Although dialectically one with the Cedar valley people, culturally this southern extension resembled more the St. George or perhaps even the Moapa.

*Beaver.* North of the Cedar are the Beaver, a group situated, like the preceding, with the bulk of its territory within the Great Basin but bordered along the east by a narrow strip of the Plateaus. From the western front of Tushar mountains, Beaver country extended westward to include the nameless range in which Indian Peak is situated; and from an indeterminate line across Escalante desert on the south, north nearly to Sevier lake.<sup>9</sup> The latter was Southern Ute.<sup>10</sup>

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through Southern and Southeastern Nevada, 1869. 37, 47, Eng. Dept., U.S. Army, 1875) implicates the Moapa by stating that their chief "is known to have been engaged with some of his Indians in the Mountain Meadow massacre," but this is not valid reason for assuming that the district is within Moapa territory. The Southern Paiute were exceedingly mobile, particularly after the introduction of the horse.

<sup>9</sup> From Tushar mountains to Sevier lake the boundary follows the statement of my Indian Peak (Beaver) informant in passing between Cove creek and Dog valley, thence northwest between Black Rock spring and Beaver mountains, thence south of Sevier lake. A Payant (Southern Ute), formerly of Kanosh, Utah, with whom I worked for a half day, stated that the division was slightly south of this: from between Pine and Cove creeks to the northern tip of Mineral mountains, then south of Black Rock spring to the southern end of Beaver mountains, thence south of Sevier lake. The area in dispute is small, actually little is involved but the ownership of Cove creek and Black Rock spring.



*Panaca*. West of Indian Peak maps are increasingly inadequate, as a consequence of which boundaries are doubly difficult to assign.<sup>11</sup> It seems reasonably certain however that the band designated as Panaca claimed the territory from the valley west of "Indian Peak range" to the crest of Pahroc range. For lack of maps the division between the Panaca and their Shoshonean neighbors is difficult to trace. Practically all of Snake, Cedar, and Bristol ranges were within Panaca bounds, and I have run the line more or less arbitrarily across the divide near the northern limits of these ranges. Southward the Panaca owned the upland to and including the northern tip of Mormon range.

*Paranigat*. The small band next west, the Paranigat, may be assigned boundaries with greater assurance, despite the continued lack of a detailed map. On the east they were bounded by Pahroc range, on the west by Desert valley. The northern boundary is best described as passing between Irish mountain and Golden Gate range, thence northeast to Pahroc range. The southern boundary crossed "Delamar mountain" south of Coyote spring to a point just south of the dry lake in Desert valley. The Shoshone, speaking an unintelligible language, surrounded the Paranigat on the north and west; with them relations were cordial.

The wisdom of calling this band Paranigat may be questioned, for although the Powell-Ingalls report<sup>12</sup> lists the "Pa-ran-i-guts" of "Pa-ran-i-gut Valley," there is possibility of confusion with the Moapa, whose name for themselves is *Paránaγī* (said to mean "those who stick their feet in water:" Lowie, *loc. cit.*, and Sapir, 597, have the same etymology). How the valley came to be named I do not know.<sup>13</sup> But since Moapa, as a name, is well at-

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According to Simpson (J. H. Simpson, Report of Explorations across the Great Basin of the Territory of Utah, in 1859: 35, Eng. Dept., U.S. Army, 1876), "The Pah-vants occupy the Corn Creek, Paravan and Beaver Valleys, and the valley of the Sevier." Doubtless this is correct as regards Corn creek and (upper) Sevier valley; correct as regards Beaver only if he refers to the valley along the lower course of Beaver river; incorrect as regards "Paravan."

<sup>10</sup> Purely as an aside, it may be noted that informants at Indian Peak placed the Shoshone-Southern Ute boundary between Confusion and House ranges.

<sup>11</sup> An added disadvantage was that the only available Panaca informant was living at Indian Peak, from which the Panaca country is not readily accessible.

<sup>12</sup> Annual Report of the Commissioner of Indian Affairs, 1873: 50, 1874.

<sup>13</sup> Davis (Sam P. Davis, *The History of Nevada*, 1: 187, Reno, Nevada, and Los Angeles, California, 1913) states that "The Pah-ran-a-gat Indians are a branch of the Ute family and derive their tribal appellation from the cultivation of the watermelon, which in their language is called pah-ran-a-gat (pah meaning water, and ran-a-gat melon or vine growing)." Since watermelon is *sántikats*, Davis evidently refers to pumpkin, *paraγad*. A derivation from the Moapa band name seems more likely.

tached to the southerly valley and band, and Paranigat likewise is well attached to the northerly valley, if not to its occupants, the simplest solution is to continue to designate the southerly group as Moapa and to apply Paranigat to the northerly band.

*Moapa.* The Moapa people owned a broad strip of desert country between the southern limits of the Paranigat and Panaca bands and the Colorado river. On the east they extended to the Virgin mountains, on the west to Sheep range and Las Vegas valley. The map does not represent adequately the proportion of low but rugged mountain country contained in this district, most of which was of little use except for occasional hunting. Settlements and activities really centered along the Moapa and Virgin streams.

*Las Vegas.* The band next west, about Las Vegas, Nevada, is referred to occasionally in the literature as Chemehuevi, but that name attaches itself principally to the band in California, along the west shore of the Colorado, for whom it is reserved in this paper.

At the Moapa-Las Vegas boundary the Colorado river makes a sharp turn and no longer flows west, but south. The south-flowing course bounded the Vegas people on the east, from Callville wash<sup>14</sup> to Tavúku (cottontail rabbit mound), a site just upstream from Cottonwood island. From this point to below Needles the river shore was held by the Mohave.

From Callville wash the boundary followed the borders of Las Vegas valley northwest, passing between Indian springs and Pintwater range, and encircling the northern tip of Spring mountains to the small mining town of Johnnie; from here it passed between Funereal mountains and Black range, thence south along the western slope of the latter, bringing the Vegas people to the very borders of Death valley. More than likely Black range was held jointly by the Death Valley Panamint and the Las Vegas; at best it was useful only as a source of mountain sheep and certain edible seeds. From Black range the western boundary skirted the base of Avawatz mountains, crossed the barren "sand hill" district east of Soda lake,<sup>15</sup> and encircled Old Dad mountains. From here it swung northeast,

<sup>14</sup> Moapa informants placed the line at Callville; so also did two Vegas informants, but a third placed it at Las Vegas wash. As there seems actually to have been a small Vegas encampment at the mouth of Callville wash, the former data are undoubtedly correct.

<sup>15</sup> Garcés, on his traverse from the Mohave to Soda lake, in 1776, says of Pozos de San Juan de Dios, "Here begins the Beñemé [Vanyume] nation" (Elliott Coues, *On the Trail of a Spanish Pioneer, the Diary and Itinerary of Francisco Garcés, 1775-1776*, 1. 238, 1900). Coues identifies this place, although not with certainty, as Marl springs. Marl springs appear to be the Áipava (boy spring) of my informant, an identification which is substantiated by Kroeber's statement (*op. cit.*, 108) that Áipava is "on the old wagon road from Mohave valley

and passing Clipper mountain on the south, ran between two unnamed mountains to join the Mohave boundary at Dead mountains, some distance inland and southwest of Fort Mohave.

*Chemehuevi.* The Chemehuevi proper adjoin the Las Vegas to the south. On the northeast they were bounded by the Mohave and on the east by the Colorado river. Chemehuevi territory extended along the west shore south to the Palo Verde mountains,<sup>16</sup> from which point the line separating them from other California peoples ran north, passing Ironwood mountains on the east side and, crossing the Maria mountains, swung northwest along the Iron mountains, thence between Old Woman mountain and Cadiz dry lake.

By their own statement and by that of the Vegas band, the Chemehuevi are a recent offshoot of the Las Vegas. Shortly before the middle of the last century they pushed southward, establishing themselves first in Chemehuevi valley and later spreading downstream, to occupy the area left vacant by the Yuman Halchidhoma. More detailed material on this expansion will be contained in a later paper.

This completes a very brief listing of the fifteen groups which to the best of my knowledge comprise the Southern Paiute-Chemehuevi. The boundaries are, I think, substantially correct, although some are vague and subsequent checking would alter them at least in detail. The situation either side of the Nevada-Utah line is perhaps the most uncertain. In the majority of cases boundary evidence from adjacent bands is well in agreement; and the precision with which informants are able to delimit their territory certainly does much to dispel the long-standing impression of weak localization which attaches to Great Basin tribes.

In conclusion, it remains to be seen how the fifteen groups of Southern Paiute here specified agree with the Powell-Ingalls report, on which the account in the Handbook of American Indians is based.<sup>17</sup> It lists thirty-one

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to the Mohave river." Both Kroeber's informant and mine placed the boundary just west of Áipava, between it and Soda lake (i.e., Mohave sink).

<sup>16</sup> Which one informant called "Chuckwalla mountains," not to be confused with the range of that name to the west.

<sup>17</sup> Powell-Ingalls, *op. cit.*, 50-51; Handbook of American Indians, BAE-B 30, pt. 2: 188, 1910. The Handbook listing omits Powell's Kau-yai-chits (Ash meadows) and adds Pawipits. The latter name appears to be derived from pa-uip<sup>1</sup> (water-canyon). Palmer (98, see below) applies "Pah-weap" to Beaver dam wash; the latter my Moapa informant called Matúkwá (meaningless?) and applied Pa'ufp<sup>1</sup> (which he translated as water-running) to a near-by spring, at the northwest end of Virgin mountains.

Aside from the Powell-Ingalls report there is only one other listing of the Southern Paiute which pretends to completeness. This is a copyrighted paper in the Utah Historical Quarterly

"tribes" which, in the table below, are equated with the band classification given in the present paper. In the first column are listed the fifteen bands; in the second, the Powell equivalents; in the third, an explanation of the Powell designations, so far as my notes and other available data permit; and in the fourth, Powell's location of each "tribe."

In the first place, it will be noted that the Powell report has no entry corresponding to the Kaiparowits, Gunlock, or Chemehuevi. Unless there are more than fifteen bands, his thirty-one tribal names therefore must apply to the remaining twelve of my bands. Actually the discrepancy in numbers is not as grave as appears. It is due solely, I believe, to the fact that Powell has listed as tribes a number of local place names, chiefly within Moapa and Las Vegas territory. This is thoroughly understandable: if one should inquire the name of the people living in the Providence mountain district, e.g., the answer almost certainly would be, *Timpísaxwatsi-níwí*, turquoise (Providence mountain)-people; or, in the Las Vegas valley, *Yíwáant<sup>1</sup>-níwí*, (Las Vegas) valley-people. The answer, without further specific inquiry, would give no clue to dialect (i.e., band) affiliation. The inclusion of place names has multiplied the entries in Powell's list and is, moreover, in large measure responsible for the somewhat misleading report of "alliances" among the "tribes."

The Las Vegas band is the best case in point. Eleven<sup>13</sup> of the localities from which Powell enumerates "tribes" are within Las Vegas precincts. But an examination of the names of these groups (column 3) shows that nine and possibly ten of the eleven are with certainty identifiable as local place names. As to whether these constitute one band or eleven, I can only follow informants in stating that the Las Vegas bounds entered on the map enclose an area identical in speech as compared to adjacent districts. More-

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(6 88-102, 1933) by Mr Wm. R. Palmer, President of the Parowan Stake of the Mormon Church. In it are named and located thirty-five clusters of Paiute (including some here reckoned as Southern Ute), which clusters the author designates interchangeably as tribes, clans, and colonies. As Mr Palmer indicates, what he has is essentially a list of "headquarters," and his list, like that of Powell's, includes a large proportion of spring and local place names. Apparently Mr Palmer is unaware of the entity of what are termed bands in the present paper. His data for Utah and the adjoining Arizona strip are fuller than those for Nevada and California; probably they come chiefly from informants of Cedar City, and the Kaibab and Shivwits reservations. Several other papers by Mr Palmer in the same series contain interesting material on the Southern Paiute, unfortunately much of it is unusable.

<sup>13</sup> With one possible exception. Powell's *Kau-yai'-chits*, at Ash meadows. If this is to be reckoned Paiute at all, it certainly must be Las Vegas; but informants stated that although a number of Vegas people resided there, they were living among Shoshone, in Shoshone territory.

	"Tribe" (Powell and Ingalls)	Locality (Powell and Ingalls)
1. San Juan	11. Kwai-an'-ti-kwok-ets	East of Colorado River
2. Kaiparowits	6. Pa-gu' its	Pa-gu Lake
3. Panguitich	7. Kai'-vav-wits	Vicinity of Kanab
4. Kaibab	5. Un-ka-ka'-ni-guts	Long Valley
5. Uinkaret	9. U'-in-ka'-rets	U'-in-ka'-ret Mts.
6. Shivwits	10. Shi'-vwits	Shi'-vwits Plateau
7. St. George	8. U'-ai-Nu'-ints	Vicinity of Saint George
8. Gunlock	-----	
9. Cedar	3. Un-ka-pa-Nu-kuints'	Vicinity of Cedar
10. Beaver	2. Pa-ru'-guns	Vicinity of Parawau
	4. Pa-spi'-kai-vats	Vicinity of Toquerville
	1. Kwi-um'-pus	Vicinity of Beaver

— — — Palmer<sup>10</sup> makes the likely suggestion that "Kwe-ian ti Kwak-its . . . means 'from across the river' " and refers to *any* tribe south of the Colorado. Cf. Sapir, 646, -q'waia-nturywa-, to opposite, across.

Pa-yi-thai (from payth, fish)  
from Kai'avate (mountain-lying down, Kaibab plateau)  
Sapir, 549, "aqqa'-q anu'ya-tet-qwa, red-cliff-base-people (band formerly living in Long Valley, now with Kaibab Paiutes);" on Sapir's map (Kaibab mts.) Long valley is within Kaibab territory, my informants also considered Long valley Kaibab, from Yu'inkadi (pine knoll, Mt. Fremont), from Cu'vi (meaningless, Shivwit plateau), from Lu'ann (cultivators, planters; name of St. George band).

perhaps from Ankámunkwatsé (sp.?), which on native drawn map is second creek south of Kanarra (i.e., unnamed creek across valley, slightly southeast of New Harmony). Sapir, 598, "aqqa'-pa-nu'q(w)u-tet-qwa, red water-flowing-people, Red-stream people (band of Paiutes near Cedar City)."

from Parúxun (said to mean 'water standing all the time [?]', Parowan, Paragonah lakes). Sapir, 597, gives meaning as "fighting water," probably same as Pas' (name of district on lower Ash creek).

evidently Kwi'inputs (from kwin, edible root of *Fraxera spretosa*; name of Beaver district) (Cf. Sapir, 598, qwi'ú-mpa-tsq-wa, crown (?)=spring-people.

<sup>10</sup> Wm. K. Palmer, Utah Indians, Past and Present, Utah Hist. Quart. 152, 1928.

11. Panaca  
12. Parinigat  
13. Moapa  
20. 'Uson wa'-ra-its  
19. Pa-ran-i-guts  
13. Mo-a-pa-ri'-ats  
12. Sau-won'-ti-ats  
14. Nau wan'-a-tats  
15. Pin'-ti-ats  
16. Pa room'-pai-ats  
17. 'I-chu ar-rum pats  
18. U-tum'-pai-ats  
21. Nu-a'-gam-tis  
22. Pa-ga'-its  
23. Kwi-en'-go-mats  
24. Mo-vwi'-ats  
25. No-gwats  
26. Pa-room'-pats  
27. Mo-puats  
28. Ho-kwaits  
29. 'Tim-pa-shan'-wa-got-sits  
30. Kau-yai'-chits  
31. Ya'-gats  
14. Las Vegas  
15. Chemehuevi  
from Sawādī (sagebrush open; out; site of Panaca), probably from Parinayā, Parinayā (those who stuck their feet in water; but this is old Moapa band name). Cf. Lowie, *loc. cit.*  
from Muápa, Muápa (meaningless [?]; Moapa [Muddy] creek).  
- - - ?  
- - - ?  
- - - ?  
Parimpaia (opening of water; head of Moapa creek, at Home ranch).  
evidently *at-tarimpats* (catslaw spring), probably in Overton-St. Thomas vicinity because given by Powell as residence of "To-shoop," Moapa chief.  
from Witumpaiaha (wash-out; site of Wiser ranch, near Glendale, Nevada)  
from Ywāqant (valley; Las Vegas valley).  
probably from Parā (much water, Colorado river); Calville wash called Pāuntī, from pawāb, a grass).  
Kweiukoma (other side hill, summit; Indian springs).  
Muvi (meaningless; Cottonwood island); originally Mohave territory.  
Noxwā, Noxwā (meaningless [?]; Spring mts.).  
Parumpi (opening; Pahump spring).  
Moywi (meaningless, Kingston mountains).  
Okwāi, Okwāi (meaningless, Ivanpah mountain).  
'Timpisaxwats (stone-blue, turquoise, Providence mountains).  
- - - ? Ash meadows (Toi'óits, meaningless) belonged to Shoshone, although a few Paiute resident there.  
Yayā (meaningless; spring just north of Tecopa, in Armagosa valley).  
Meadow Valley  
Pa-ran-i-gut Valley  
Mo-a-pa Valley  
Mo-a-pa Valley  
Mo-a-pa Valley  
Mo-a-pa Valley  
Mo-a-pa Valley  
Mo-a-pa Valley  
Las Vegas  
Vicinity of Colville  
Indian Spring  
Cottonwood Island  
Vicinity of Potosi  
Pa-room Spring  
Kingston Mt.  
Vicinity of Ivans-paw  
Providence Mountain  
Ash Meadows  
Armagosa

over, people from all the various local regions within Vegas territory appear to have a genuine band designation, Tantiúts (northerners, as opposed to the Chemehuevi), or Tiriñiwī (desert people, earth people, in contrast to the river shore Chemehuevi).

Much the same holds for the Moapa. As Powell locates seven "tribes" in Moapa valley, they cannot other than fall within our Moapa district. Three of these seven are readily identifiable as place names, while a fourth, I'-chu-ar'-rum-pats, is almost certainly another, to be translated catsclaw-spring. As for the remaining three, there is little doubt that were my Moapa place-name data not deficient, these also could be recognized as local camp sites, springs, or the like.

In short, the situation may be summarized thus: three new bands must be added to the Powell list; and of the latter's thirty-one bands, eight stand unchanged; two are Kaibab; three, Cedar; seven, Moapa; and eleven, Las Vegas. On the whole, the agreement is rather gratifying and gives weight to the present grouping and at the same time it substantiates the Powell classification of sixty years ago.

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## HERDING RITES OF THE BECHUANALAND BAKXATLA<sup>1</sup>

By I. SCHAPERA

**I**N common with most of the South African Bantu, the Bakxatla baxa-kxafêla have undergone many changes in culture as a result of their contact with European civilization. Their present home is a demarcated reserve in the south-east of Bechuanaland Protectorate, bordering on the Transvaal. About three-fifths of the tribe dwell in the large village of Mochudi (population roughly 10,000), while the rest are scattered about in several much smaller villages to the south and west. Originally they lived in the Rustenburg district of the Transvaal, which they left just over sixty years ago owing to trouble with the local Dutch authorities. Even before their departure they had been influenced to some extent by their white neighbors, while since their settlement in the Protectorate they have steadily absorbed elements of European culture from missionaries, traders and various other sources.

The results are most readily noticeable in economic life. Clothing, dwellings, utensils and weapons all tend to be more and more of European pattern and material; money circulates freely; and large numbers of young men, occasionally also women, go out annually to work in the Transvaal and other white centers of employment. Most of the men already speak English or Afrikaans in addition to their own language, and education within the Reserve is rapidly bringing the same knowledge to the children. Social and political organization have on the whole been but little affected, as the people have with certain reservations been allowed to retain their traditional system of government and jurisdiction. But in religion the change has also been profound. After nearly thirty years of missionary effort by the Dutch Reformed Church, Christianity became accepted as the official religion of the tribe when the chief Lentswe was baptized in 1892. Since then it has obtained so fast a hold that at the present time little active trace remains of the original system of worship. Those men and women who are not full members of the tribal Church are for the most part simply indifferent to religion. The vague ideas they hold about supernatural beings are largely inspired by missionary teaching, blended confusedly with the old native doctrines, and there is nothing at all in the form of any positive cult outside Christianity.

Nevertheless one aspect of the old ritual life still persists strongly among most of the people, and that is the practice of magic. Agriculture,

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<sup>1</sup> This paper is based on information collected during several trips made to the Bakxatla in the years 1929-31 with the aid of financial grants from the University of Cape Town.



animal husbandry, hunting, hut-building, love-making, care of the health, all these and many other activities are even now each accompanied by a variety of magical usages regarded by the people as indispensable for safety, success and prosperity. The belief in witchcraft and sorcery, though somewhat modified, is still vigorous; the professional magicians continue to flourish; and at the commencement of the ploughing season the chief is still expected to ensure the coming of rain. It is a most illuminating comment on the function of magic, on its practical bearing upon the everyday activities of the people, to find that many a man who has long abandoned ancestor-worship in favor of the Gospel, or perhaps has never even known the old tribal cult, yet feels it necessary to have himself and his family, his dwellings, his cattle and his gardens regularly "doctored." Christianity has provided an acceptable substitute for the old form of worship, but to most of the Bakxatla it has as yet nothing to offer in place of the hope and confidence inspired by magical ritual.

#### ANIMAL HUSBANDRY AMONGST THE BAKXATLA

The following notes describe the rites, mostly magical, observed amongst the Bakxatla at the present time in connection with their cattle, sheep and goats.<sup>2</sup> Animal husbandry, although not relied upon for subsistence to the same extent as agriculture, yet plays an important part in the economic life of the people. The cattle and more rarely the goats supply food in the form of milk, drunk both fresh and sour. They are seldom slaughtered except by owners of large herds or on occasions of festivity, but most of the animals dying of disease or other causes are eaten. The younger oxen are used as draught animals with wagons and ploughs; the older cattle and the small stock are generally bartered or sold to the traders in order to pay the hut-tax and satisfy the needs introduced by European civilization. The skins are made into sandals or thongs, or are disposed of to the traders. Cattle are also the medium in which bride-wealth (boxadi) is paid at marriage to the father of the bride by the bridegroom's family, and in which fines are levied at the tribal courts (kxotla). A man's wealth is estimated by the size of his herds, and it is the ambition of every Mokxatla to have as many cattle as possible. Cattle figure also in many of the surviving ritual practices of the people, and at the end of the old circumcision (boxwêra) ceremonies the initiates were taught to sing the following words, which reflect the high esteem in which cattle were held and still are held:

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<sup>2</sup> A preliminary account of these rites, written soon after my first trip, was published in the *South African Journal of Science* 27. 557-61, 1930. Since then I have obtained so much additional information that this earlier paper must be regarded as largely inadequate.

Malenkhu a marumô,  
Modimo o nkô o metsi,  
Moxodungwana o mollo,  
More mofisa banna ditedu;  
Kxomo modimo wa moxae,  
Kxomo lôtlanya dithšaba,  
O bolaile banna ba le bantsi.

A bundle of spears,  
God with the wet nose,  
A short, hot drink,  
The medicine that burns the mens' beards;  
Cow god of the home,  
Cow that makes the nations fight,  
You have killed many men.

Every wealthy cattle-owner will have one or more cattle-posts of his own, while on the other hand a couple of small owners may at times combine to keep a single post. Members of the same lineage group (kxôrô) tend to have their cattle-posts situated close to one another in the same locality. These cattle-posts (meraka; sing. moraka) are simply grazing-stations selected for their accessibility to water and for the quality of their pasturage. They are generally situated a good distance away from the village settlements, sometimes a day's journey or more. The cattle graze in the open veld by day, and at night are brought back to a specially-erected kraal or enclosure made of thorn bushes. The central feature of the kraal is the patlêlô, a large circular space in which the cows are milked every morning and evening. Leading into it are the lesaka, or cattle-pen proper, in which the cattle are kept at night, and the lesakana, a smaller pen for the calves. Close by is the setlaxana, a cleared space where the herd-boys keep their utensils and belongings and make their home. Sometimes a crude hut is built to provide shelter in case of rain, but as a rule the boys sleep in the open round a fire. The post is not situated permanently at one spot. As soon as the grass in the vicinity becomes exhausted, or the water supply begins to fail, it is moved to a more favorable site, where a new kraal is erected.

Most of the cattle remain continuously at these posts. The cows are kept there all the year round, their milk being collected in special milk-sacks (makuka) which are sent into the village as soon as they are full. In the late summer, when conditions are at their best, the women and children often come to live at the post for a while and feed upon the fresh

milk as a change from the monotonous village diet of sorghum porridge. The draught oxen are also kept at the post, but when required for any purpose they are brought into the village. Here every lineage group (kxôrô) of the tribe has its own cattle-pen (lesaka), a strongly-built enclosure of stout wooden poles, which is used by all the members of that lineage group. Next to it is generally situated their local kxotla, or men's place of discussion. The great central kxotla where the chief administers justice and where tribal gatherings are held is next to the cattle pen (lesaka) of the royal lineage group. Goats and sheep are also kept out at the cattle-posts, where separate enclosures are made for them; but many of the people also keep a number of goats in the village to provide milk for the household, to slaughter and to trade. These goats are put at night into small kraals of thorn bushes, made by every man for himself.

The cattle are herded by the older boys, the sheep and goats by those between the ages of about six and twelve. Adults seldom continue to act as herdsmen once they are married, unless they are so poor that they have to adopt this as a means of livelihood. But every cattle-owner takes an intense personal interest in the welfare of his animals and frequently visits his post to supervise the doings of his herdboys. In their management of cattle the BaKxatla are guided to a considerable extent by practical experience. They know where good grass and water are to be found, what kinds of grass are unsuitable or even dangerous for the cattle and must therefore be avoided, what remedies to apply in the case of certain common ailments and diseases, how to protect their animals from attack by wild beasts, and so on. In all this they rely upon the lessons of past generations, and these activities are accordingly conducted in a straight-forward manner with the knowledge and assurance that if everything is done properly all will go well.

#### RITUAL ACTIVITIES IN HERDING

But there is also a range of activity over which the herdsman realizes that he has no effective control. Despite all his efforts and precautions it may still happen that his cattle do not prosper. Water he can provide as long as there is any available, even if he has to dig wells in the river beds in order to reach it; but if there is persistent drought all his experience cannot enable him to save his cattle from thirst or starvation. Again, he attempts as far as possible to control the breeding of his cattle. He selects his bull carefully, and lets it run freely with the cows. But he can never be entirely sure that it will function satisfactorily and that his cattle will breed successfully. Or an epidemic may break out and reduce the size of his herds; or in spite of all the care exercised by his herdboys some of the

cattle may go astray and never be recovered; or his kraal may be struck by lightning. Here and in similar situations the Moxxatla has to cope with conditions where he cannot rely upon experience alone to afford him safe guidance. He therefore falls back upon magic to reinforce such efforts as he is able to make, and to restore the hope and confidence lost in his appreciation of the difficulties confronting him.

There is a good deal of individual variation in this respect. The observance of magical rites is entirely optional: it is left wholly to the discretion of each cattle-owner whether he has recourse to them or not. Some owners call in the aid of the professional magician (ngaka) on every conceivable occasion. Others, still in a small minority, claim to dispense altogether with "doctoring" of any sort. Between these two classes are the great bulk of the people, who rely upon magic in connection with some activities only and do not feel the necessity for it in others. This divergence in practice may be attributed largely to the effects of civilizing influences, including the partial adoption of European methods of dealing with livestock diseases. Moreover the observance of magical practices, widespread as it is even among professing Christians, is frowned upon though not actually forbidden by the Church. Consequently it is sometimes surrounded by a new element of secretiveness which should normally have been absent. Most of the men whom I questioned on the subject of cattle magic admitted readily enough that they "doctored" their cattle. But in a few instances I encountered an air of restraint, which they subsequently admitted was due to their realization that as "good Christians" they should long ago have abandoned these practices.

The rites associated with cattle-herding fall into two general classes. There is the use of magic for the direct purpose of increasing and protecting the cattle, and then there are various taboos and other ritual usages whose observance is necessary in order to keep the animals free from harm and misfortune. The purely magical rites are known by the generic name of *kalafi ya dikxomo*, "doctoring of the cattle." (The noun *kalafi* is derived from the verb *xo alafa*, used for any magical rite the essence of which lies in the application or other use of dithlare, material substances or "medicines.") They are performed in the first instance by a professional magician (ngaka), who knows what to do and what medicines (dithlare) to use. Not all magicians profess to "doctor" cattle. Many of them direct their attention to other forms of magic, and have never learned the procedure and medicines used in treating cattle. On the other hand some have made a special study of cattle magic, and are known throughout the tribe as being skilled in this particular branch of magical activity. The rites and medicines

they employ vary slightly in detail, but on the whole they all follow the same general system of treatment.

The full "doctoring" of cattle as a rule embodies three different processes: *xo thaa lesaka*, to "strengthen" or "found" the cattle-kraal; *xo thusa dikxomo*, to "help" the cattle increase their fertility; and *xo alafa dikxomo*, to treat the cattle with medicines which will shield them from sorcery and misfortune. Except for certain forms of the last-named process, I have not had the opportunity of actually witnessing any of these rites. My description is therefore based very largely upon oral evidence only, and for this reason cannot be regarded as fully satisfactory. My informants, however, included professional magicians, cattle-owners and former herd-boys, all of whom had first-hand experience of cattle magic.<sup>3</sup> The following account is accordingly perhaps as comprehensive as evidence of this nature can make it.

#### THE MAGICAL "FOUNDATION" OF THE KRAAL

The ceremony of *xo thaa lesaka* is performed whenever a new kraal has been built. Molefê Sexoxwane, a youth with considerable knowledge of magical procedure in general, told me that a man wishing to build a new kraal first requests a magician to consult his divining bones (*ditaola*) for a suitable site. The man goes in the direction indicated by the bones, and when he finds a spot meeting with his approval calls the magician again to test its suitability by means of his bones. If the bones indicate that the place will be satisfactory, the magician takes a little sand from the spot and mixes it with his *thsithlô* or magical ointment. Then he makes a few small wooden pegs which he smears with this ointment, and knocks them into the ground over which the kraal is to be built. The cattle-owner can now erect his kraal with the assurance that it is guarded against sorcery.

None of the professional magicians with whom I discussed cattle magic had ever performed this particular rite. They did not deny that some of their colleagues might practise it, but said that as a rule a cattle-owner does not have his kraal doctored until after it has been built. Then, before any cattle are driven into it, he summons a magician who is known to be an expert in cattle magic. The latter, informed beforehand of the purpose for which he is required, comes to the newly-erected kraal in the late

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<sup>3</sup> I should like to mention especially Rapedi Letsêbê, the tribal rainmaker, and Lefi Maxoleng, among the professional magicians, Chief Isang Pilane and Simon Kobe, among the cattle-owners; and Sofônia Pôônyane, Molefê Sexoxwane and Mavanelô Pilane among the former herdboys.

afternoon, and sends away any men who may be about the place. This is done to eliminate the possibility that anyone might try to "spoil" his magic through sorcery. With him the magician brings some small wooden pegs (dimapô), made as a rule from the wood of the morobê (*Ehretia hottentotica*) or mokxalô (*Zisypus mucronata*), a long stick (mopokwana) of the same wood, and his medicine horn of ointment. This ointment (thsithlô) is a fine black powder made from small fragments of many different vegetable, animal and mineral substances, all of which have been cut to pieces, mixed together and burned, and then ground down very finely. This powder is mixed with some kind of animal fat, and then put into a hollow horn for future use. The fat used with the magical ointment for cattle is always that of a cow or ox. (There are different kinds of thsithlô for different kinds of magic, but they all have the common function of protecting the object or person to which they are applied and of "fighting" against the magic of the sorcerer. Each magician uses his own particular blend of ingredients for his thsithlô mixtures.)

The magician takes four of his pegs, smears them with the ointment and then with a suitable stone hammers them into the ground so that each of them is completely buried below the surface. He buries one at the entrance to the kraal, another in the center of the kraal, and the two others one on each side of the line connecting the first two pegs. Then he takes the long stick (mopokwana), smears it with ointment, and lays it down flat on the ground in a groove which he makes at the entrance to the kraal. He nails it down by means of four more pegs, two on each side, which have also been smeared with ointment, and then covers it over so that it cannot be seen. This stick and the pegs are known as the foundations (methêô) of the kraal. The whole process is carried out in perfect silence. I was particularly anxious to learn whether any spell accompanied it, but all the magicians whom I questioned said that their ointment was sufficiently powerful and that it did not need words to strengthen its effect.

Slight variations are found in this rite. One magician said that instead of burying the mopokwana at the entrance to the kraal, he sets it upright into the ground somewhere in the fence of the kraal. Also he does not bury the pegs in the kraal itself, but nails them into the poles constituting the fence: one or two into the poles on each side of the entrance, and two or three round the sides. He could give no reason for this deviation from the normal practice except that the magician to whom he had been apprenticed had taught him to use this particular method. Another magician, who had been taught among the Bapedi of the Transvaal, follows their usage of smearing a small round stone (tsilwane) with ointment and burying it in a hole made in the middle of the kraal.

Some little time after this doctoring, the builder of the kraal kills a beast and invites his assistants and his neighbors, especially the old people, to come and eat it at the men's meeting place (kxotla) of his lineage group. This beast is also said to "strengthen" the kraal, but its primary function nowadays in the eyes of the Bakxatla is to reward those who have helped the man to build the kraal. (In the olden days, if we may judge from similar rites practised by the other Bantu tribes, it was probably intended as a sacrifice to the ancestral spirits, but I could get no information to confirm this hypothesis.) I was told by one informant that no cattle would be driven into the kraal before this beast had been killed and eaten, but others agreed that this was not necessarily the case. No cattle, however, will ever be put into a kraal before the foundation rites have been performed. This, of course, applies only to those kraals whose owners still make use of magic. Some cattle-owners have departed so far from traditional usage that they do not think it necessary any longer to doctor their kraals.

The rites just described are performed in the case of the village kraals, which are more or less permanent in structure. Out at the cattle-posts, where as we have seen the cattle are moved about from one spot to another, new kraals being built for them at each locality, similar rites are performed before the cattle are allowed to enter the kraal. Every cattle-owner who uses magic in connection with his cattle possesses a horn of magical ointment given to him by the magician who doctors his cattle. This horn is entrusted to the principal herdboys (thsiméxa), who whenever a new kraal is erected makes some wooden pegs, smears them with the ointment and knocks them into the ground at the entrance to the milking area (patlêlô) and cattle pen (lesaka) and in the center of each. Sometimes he may not use pegs, but merely smears the ointment here and there on the thorn bushes constituting the fence of the kraal. In the same way, when a goat kraal is being built, the first two bushes to be placed for the fence are smeared with ointment at the points to be inserted into the ground. Still another variant, described to me by Sofonia Pôônyane as employed at his father's cattle-posts, lies in the fact that the magician gives the principal herdboys a horn containing a powdered mixture of roots, bulbs, and leaves. Whenever they move the kraal to a new place, they first make the fence, and then the principal herdboys dig a hole in the middle of the milking area, into which he pours a little of the powder from this horn. As he does so, he repeats the following spell, which he has been taught by the magician: *disa kxomo tsa ethso, mothusô wa me*, "guard our cattle, my mothusô." (Mothusô, from *xo thusa*, to help, is the generic name for "medicines" used more particularly with productive magic.) This is the

only instance I have been given of a spell being used in connection with the "foundation" rites, and it should be noted that the "medicine" in association with which it is found is not the normal *thsithlô*, but a mixture of an altogether different nature.

The object of these rites, according to my informants, is to bring good luck upon the kraal and to protect its cattle from disease and the activities of the sorcerers (*baloi*). The fear of sorcery is not entirely imaginary. I was told of several devices employed to bewitch the cattle of another so that they should die or diminish. For instance, a man wishing to inflict injury upon someone else through his cattle will try to obtain something pertaining to those cattle, such as their milk, or tail hairs, or urine, or perhaps a piece of meat from a dead beast of that kraal. This he takes to a magician (*ngaka*) whom he knows that he can trust, and asks him to work upon it so that the cattle with which it is associated will suffer. If he wants to kill them by lightning, the magician takes some splinters of a tree struck by lightning, burns them, mixes the ashes with haematite powder (*thôxa-dimô*), and adds the substance brought to him. Then he tells the man to smear this mixture on the fence of the kraal, or to bury it inside the kraal if he can find an opportunity of doing so. Within a few weeks the cattle will be struck by lightning!—but only if the kraal has not been doctored. If it has already been doctored, the *thsithlô* will protect its inmates. Sometimes, again, the sorcerer takes the limb of a corpse dug up at night from its grave, treats it with his "medicines," and buries it again in a small hole made in the ground beneath the fence of the kraal. Then the cattle will begin to go astray, or get lean, or die of disease, or some other misfortune will overtake them—again provided that the kraal has not been doctored.

#### DOCTORING THE CATTLE

The cattle themselves are generally doctored near the approach of the rainy season, which is the time when the bull is most active. The cattle-owner may call in the magician merely as a matter of normal routine, or else he may actually be dissatisfied with the condition and progress of his cattle and anxious to have them treated for fertility. In the latter event the magician first consults his divining bones to determine what is troubling the cattle. The bones may reveal that there is friction between the man and his wife, and that this is causing the trouble, for it is said: *xe pelo e sa itumele di tsa motho xa di tswela pele*, "if the heart is not at ease a man's undertakings do not prosper." Then the magician gives the man love medicine (*moratisô*) to restore friendly relations between him and his wife. The trouble may on the other hand be due to the evil designs of the sor-



cerers (baloi), and the necessary precautions will then have to be taken. In any case the magician and the cattle-owner go together to the cattle-post, setting out at night when nobody can see them and attempt to frustrate their object. The magician takes with him his bag full of horns containing medicines and different kinds of magical ointment as well as his own special protective medicine against the lightning which his rivals may send to injure him. At the cattle-post he first consults his divining bones to see whether his treatment will meet with success, or whether some evil influence is working against him. In the latter event he may suggest postponing the treatment for a while, but if the signs are favorable he at once starts to work.

The procedure adopted varies somewhat according to the magician. The following series of rites is most generally followed. The magician first asks the cattle-owner to shoot a cow as sacrifice (sedimô) for the others. An old cow is generally selected, and according to one informant it must be wholly or at least partially black in color. After it has been skinned, the magician cuts small pieces of flesh from each of the arteries, the inside of the stomach, the lungs, the liver and the spleen. These fragments of meat he sets aside in a small pot. In another small pot he puts the fat of the cow, especially that of the kidneys. The rest of the meat, together with the skin, he takes as his perquisite, but leaves a hind leg (serope) for the owner.

Next the magician takes various roots and bulbs from his bag, cuts them to small pieces, stamps them, and throws them into pails of water, where he leaves them to soak all day. Different magicians use different substances. One relies upon the roots of taxadima, morêrô and mpherefere; another upon moxaxa bulbs, the leaves of the mosêthla (*Peltophorum africanum*) and the twigs of the mokaikai; still another uses only the leaves of the moralla (*Commiphora* sp.) In the evening, when all the cattle are in the kraal, the magician and the owner of the cattle, each carrying a pail, go around the kraal and with twigs sprinkle the medicated water over the cattle, taking care that none of them is omitted. The herdboys stand at the entrance to the kraal with twigs in their hands which they dip into the pails beside them and sprinkle over the kraal and everything inside it. As they do so, they all shout out continuously, following the lead of the magician: a di tsalê, a di tsalê, kxomo tsa ethso, "may they bring forth, may they bring forth, our cattle," or, in another case, a di atê di ntsifalê, "may they breed and become many." When all the water has been sprinkled over the kraal and the cattle, the men and the boys return to the sleeping enclosure (setlaxana). Slight variants are found of this rite as well, but in all of them the essential features are the same: the cattle are sprinkled

with medicated water, and while this is being done a spell is uttered aloud. The purpose of the rite, according to the natives, is to promote the fertility of the cattle, to ensure that they will breed well and increase.

Sofonia Pôônyane described to me another rite performed at his father's cattle-post immediately after the sprinkling has been done. The magician adds to one of the pails two powders which he has brought with him. (These powders my informant could not identify.) He then asks the principal herd-boy to milk into this pail a little milk from a single teat of each cow which has a calf. The magician stirs this mixture with a stick, until it is fairly thick. Then he goes round to each of the cows in turn, and smears some of the paste on its vulva. He says nothing at all as he does so. This rite, which was not mentioned by any other informant, is said to render the cows attractive to the bull. The smell of the magical paste stimulates it to sexual activity, so that it will copulate with the cow.

In the morning the magician removes all the vegetable matter left over in the pails and lets it dry in the sun. Some of it he then puts in a potsherd, to which he adds the fragments of flesh taken from the body of the dead cow. He also puts in certain other ingredients from the bag of medicines which he has brought with him. Then he makes a fire, on to which he puts the potsherd, leaving it there so that its contents gradually roast. From time to time he stirs them with a small stick so that they fuse together. When they are thoroughly charred, he removes the potsherd from the fire, and with a small round stone carefully grinds the mixture to powder. This powder he empties into a hollow cow's horn. Then he pours in a little of the fat he has taken from the dead cow, and from time to time twists his stick about in the horn so that the powder becomes thoroughly soaked with the fat. He then sets aside the horn for future use. Its contents are now known as *thsithlô* (magical ointment).

In the evening, when all the cattle are in the kraal and have been milked, the magician makes a fire in the center of the milking area, using either matches or firesticks. On the fire he puts a large potsherd or some other suitable object. Then he takes more of the dried vegetable matter left over from the previous evening's sprinkling, mixes it with the fat of the dead cow, and places it on the potsherd. Then he adds to it some of his own *leswalô*. (This is another mixture of medicinal substances similar to *thsithlô*, but it is used essentially with productive magic. Its ingredients include such varied substances as grass, beetles and other insects, bone and flesh particles of the ape, lion, leopard, crocodile, porcupine, anteater, etc., all of which are cut to pieces, dried in the sun, ground down to powder, and mixed with fat. It differs from *thsithlô* in that its ingredients are not

burned before being ground down to powder. It is generally worked up into balls about the size of a potato, from which small pieces are taken as required.) When the mixture begins to smoke abundantly, the cattle are driven near to the smoke by the herdboys, and also come of their own accord to sniff at it. The mixture is kept over the fire until the smoke dies away by itself. The purpose of this rite is to fumigate the cattle with the essence of the burning medicines, and so ensure that good luck will follow them in their breeding and general wellbeing.

After this has been done, the magician takes from his bag two small wooden pegs, smears them with the ointment (*thsithlô*) he has prepared during the day, and buries one in the center of the milking area and the other at its entrance. Some magicians bury four pegs inside the kraal, and then peg down a long stick at the entrance, just as they do when a new kraal is being doctored; but most of them use only the two pegs. They again say nothing at all as they bury the pegs. The aim of this rite, as in the case of doctoring a new kraal, is to protect the cattle from sorcery and disease.

Lastly the magician calls the owner of the cattle and all the herdboys into the sleeping enclosure. Taking them in order of precedence, from the owner down to the youngest herdboy, he there cuts each of them with a knife on every joint of the body. Into each cut he rubs in a little of the same ointment with which he has doctored the pegs. (According to another informant, the magician cuts each person on the big toe and little toe of each foot, on the forehead, and on the knuckles of the hands, smearing ointment into each of the cuts.) This rite, known as *xo thswara badisa*, "to seize the herdboys," is intended to protect them all from sorcery and accident. The magician again says nothing as he performs it. When he has finished, however, he warns the boys to refrain from sexual intercourse with any girls who may visit the cattle-post, and also tells them that whenever they go home to the village they must wait a few days before they may sleep with girls. Violation of this taboo (*moila*) will bring harm upon the cattle; in particular, it will cause the cows to abort.

With this doctoring of the herdboys, the rites actually performed by the magician come to an end. Before he departs, however, he hands the horn of ointment (*thsithlô*) which he has prepared to the cattle-owner, who leaves it with the principal herdboy. The latter is told to take it with him wherever the cattle go. Whenever they move the cattle-post and build a new kraal, he must take two pegs, smear them with this ointment and bury them in the ground inside the kraal. Also, towards the beginning of the rainy season, he must put a little of the ointment on a stick and rub

it on the belly of the bull. This he must do two or three times, at a fairly long interval apart. Again, from time to time, say three or four times a year, each of the herdboys must eat a little of the ointment. The principal herdboy must see to this. In the evening, after the cattle have been milked and the boys are gathered together at the sleeping enclosure, he first eats a little of the ointment himself, dipping a stick into the horn and swallowing the ointment clinging to it. Then he feeds each of his assistants in the same way in order of seniority. The ointment is supposed to look after their bodies and keep them from harm. The magician specially tells them not to use it all up too rapidly, but to conserve it as much as possible. When the supply runs out, the cattle-owner must go to him for some more, and at the same time has to kill another cow to provide the necessary fat.

The magician also takes all that is left over of the vegetable matter from the pails, adds a little of his medicinal mixture (*leswalô*), and mixes it with the fat of the dead cow. He then puts this mixture into a large horn, which he gives to the cattle-owner. He tells him to keep it hung on a pole or tree in the middle of the kraal, or on one of the uprights at the entrance. Every month, from now on, whenever the new moon appears, the kraal-owner or his herdboy must take some of this mixture, which goes by the name of *leswalô*, and burn it in the middle of the kraal in the same way as the magician has burned the first lot of *leswalô*. Here again when the supply has run out they must go to him for more. This treatment will keep the cattle healthy, bring them good luck, and stop them from straying too much.

For all this the magician does not require any payment until the following season, when he must be given a heifer taken from the calves born after his treatment of the cattle. He tells the boys that they must come to him from time to time and report how the cattle are progressing. The people at home now hear that the kraal and its inmates have been doctored, and the sorcerers (*baloi*) in consequence will not try to bewitch the place, knowing that their attempts are foredoomed to failure.

#### SPECIAL DOCTORING OF THE BULL

In addition to the rites described above, the magician may also doctor the bull itself. This is done particularly when the herdboys complain that the bull does not remain with its own herd, but is being attracted away by strange cows. It is said that people who do not have bulls of their own will get their cows doctored so as to entice away the bulls from other herds. The magician who is called in to see to this prepares the appropriate medicines, which he smears on the vulva of each cow. Then he tells the herdboys

always to try and mix their cattle with other herds so that the bulls in the latter may sniff at the cows and, attracted by the medicines, copulate with them. The boys in charge of the other herds greatly resent this interference, which often leads to fighting amongst them if it is persisted in. They also report the fact to their kraal-owner, who will ask his magician to treat the bull so that it should remain with his own cows.

The treatment generally adopted for this purpose also helps to promote the potency of the bull. The magician takes some medicinal substance, cuts it to small pieces, puts them in a hollow horn, and then adds a little milk from a single teat of each cow belonging to the herd. The substances used vary with the magician. One relies upon the roots of sekaname (*Urginea sanguinea*) and morokolo (*Ximenia caffra*); another upon the roots of mabatšane (*Tragia sp.*); while another digs a mole out of the ground, kills and burns it, and mixes its ashes with the roots of sekaname. This is done in the evening. The following morning, before the cattle have left the kraal, he tells the herdboys to catch the bull and throw it on its back. While they hold it down, he pours the medicines from the horn down the mouth of the bull; or if he cannot do this, he pours it into the nostrils and then rubs the rest of the medicine on to the mouth of the bull so that it will lick at it. Then he makes a small cut on each side of the bull's anus in the hollow under the tail, and smears a little magical ointment into each cut. As he does so, he utters a spell, of which the following is an example: kôkôbiri yo mapaxama kxwana yo mafoloxa phatswana, monongwaxa o di kile o sa di xwêla, monongwaxa nka ke xo faxotse, "bull that used to mount the white-backed cows and descend from the red-and-white cows, this year if you do not copulate with them, this year I shall castrate you."

The bull is then allowed to get up, and as it rushes about among the cattle bellowing, the magician, in accordance with Kxatla custom, shouts out its praises (mabôkô), of which the following are two shorter examples:

thamaxê tsa mamaŋura a theku,  
maŋura di sa a tloleŋ,  
moxodungwana o mollo,  
more o jele banna ditedu,  
modimo o jeleng rrê le ngwana o tla nja.

Red-and-white cattle abounding in fat,  
the fat which they do not themselves use (as ointment),  
a short hot drink,

the medicine singed the beards of the men,  
the god that ate my father will also eat me the child

And again:

kxapêpê bata sea thsaba sea kxabola,  
tau e thsaba e ithwele moxodu

There is a fight, an animal flees and belches,  
the lion flees with a broken stomach (i.e.,  
only when badly wounded—an exhorta-  
tion to the bull to be brave, to fight until  
severely hurt).

The magician now tells the boys that the bull has been "cured," but that they must observe certain rules, otherwise the strength of the medicines will be broken and the bull will run after strange cows again. For instance, when they come back in the evening from herding the cattle, they must not fetch fire from another cattle-post, but must make their own fire. They must also not allow their cattle to mix with those of other herds, lest the bull be enticed away by the medicines with which the latter have been doctored. Most important of all, they must never hit the bull with a hide whip, as it is possible that the whip may have been made from the skin of a beast not coming from their kraal. He gives them a cane of *morêtlwa* (*Grewia cana*) or of *motsôtsôbyane* which he has smeared with magical ointment, and tells them to use this instead. He also gives them some of the same ointment to be smeared on to other canes which they must make when the one they received from him is worn out.

#### RECOVERY OF STRAY CATTLE

Apart from the rites described above, magic is used in several other connections with cattle. When cattle have gone astray, the magician may be asked to divine where they have gone. His divining-bones (*ditaola*) will indicate in what direction the missing cattle are to be found, and search will be made in that direction. Sometimes the magician performs a special rite to recall the missing beasts. First he smears magical ointment on some small wooden pegs, which he knocks into the ground where the cattle have left their tracks. This will prevent the cattle from wandering any farther. (An identical rite is performed in hunting big game. A peg smeared with ointment is knocked into the spoor of the animal, and this will prevent the animal from leaving the vicinity and enable the hunter to catch up with it speedily.) Next he goes into the kraal, where he sprinkles some water

mixed with the roots of morarwana (a wild creeper). Then he gets the dung of the cattle, and mixes it with the contents of the leswalô horn hanging in the kraal. He burns this mixture in the center of the kraal, and as the smoke rises he calls out aloud: *kxomo xoroxa kwa o leng teng*, "cow, return from where you are." The herdboys sent out to look for the cattle sometimes ties a strand of morarwana round his neck, or puts the fruits of the *mppherefere* shrub in his mouth. As long as he keeps them there, he will go along the right road and soon come up with the missing animals. When cattle have made a hole in the fence of the kraal and escaped, it is taboo (*moila*) for anybody to go through the gap. It is mended without any special usage being observed, and then the herdboys go round through the entrance. If they were "to open the place" by going out through the gap, they would expose the missing cattle to the danger of being stolen or attacked by wild dogs.

#### TREATMENT OF CATTLE DISEASES

Cattle diseases are nowadays treated for the most part along European lines, but many natives still adhere to traditional practice. Most of the common ailments are dealt with by the herdboys themselves, without the aid of a magician, and they make use of remedies known to all of them. For instance, animals attacked by liver disease (*sebete*) are given a decoction made from the roots of such shrubs as *sebete*, *lematla* or *moxanothsôthle*, which are stamped and mixed with water. Goats and sheep suffering from scab (*sekwakxwa*) are washed with a mixture of water and irritant plants such as *sekaname* (*Urginea sanguinea*) or *kxôphane*. For inflammation of the eyes (*matlôô*) the leaves of *motlopi* (*Boscia albitrunca*) or *molôxa* (*Croton gratissimus*), crushed and put into cold water, are used as a lotion; sometimes a millipede is cut and burned, and the powder thus made rubbed into the animal's eyes!

On the other hand infectious diseases, especially anthrax (*lebêtê*) and quarter-evil (*serotswana*), generally demand the aid of a magician. But in the exceptional cases where the herdsman also knows the necessary treatment he may himself prevent the further spread of the disease in the following way, which is also that employed by the magician. When an animal has died of the disease, he cuts small pieces of flesh from different parts of its body, including all the intestines. Then he takes a big bulb, such as *sekaname* or *ntšengwe*, makes a deep hole in its side, and puts in first a small piece of the root of *modikamothlaka* (a parasite creeper), then the fragments of flesh which he has cut from the dead animal, and lastly a small piece of the liver (if the disease was quarter-evil) or of the spleen

(if it was anthrax). Next he nails down all these substances to the bulb by means of mosu (*Acacia*) thorns. Then he smears some ointment (thisthlô) from his horn over the bulb. Lastly he walks away from the kraal without looking behind him. When he is some distance away, he makes a hole in the ground and in it buries the bulb, afterwards covering it up. In this way he hides the sickness away from the cattle. The dead beast is generally burned or buried, but occasionally the men and boys at the post cannot resist the temptation to eat it, although they are fully aware of the probable consequences. If they do eat it, however, they must not afterwards urinate or defecate in the immediate vicinity of the kraal, lest they contaminate the pasture and thus affect the cattle. They must go some distance away, and there relieve themselves into a hole which they make and afterwards carefully cover up again.

When cows are suffering from protracted delivery, or the afterbirth is unduly delayed, the roots of moxônônô (*Terminalia sericea*) are ground, boiled in water, and administered as a decoction, while the bark fibres of the same tree are tied round the neck of the animal. In case of abortion, a magician is called in. He takes the aborted calf (sefôlotsana), removes the amnion (letha or mohungwana) and mixes it with water and some of his medicines, which he then sprinkles over the other cattle. He also gives some of this medicine to the herdboys, who walk about after the cattle and sprinkle it in their footprints. This will prevent the disease from spreading to them. Another "very useful" medicine for the same disease was described to me by Chief Isang as being employed at his own cattle-posts. A boy is asked by the magician to shoot a female of a certain species of monkey. Its womb is removed, dried, ground down to powder, and mixed with other powdered substances. Herdboys are given some of this powder to carry about with them, and whenever a cow aborts the boy has to put some of the powder on the back of the dead calf, so that the cow may lick the medicine and thus get its womb strengthened. It is said that the medicine will also strengthen the cow itself and enable it to take the bull more successfully in future.

It may be noted here that young girls are not allowed to eat the flesh of an aborted calf, lest they also become liable to miscarriages. The meat is given to the very old women only, who like it and say that it is very soft. It may also not be eaten by men. If there is no old woman nearby, the calf is just buried in the ground, without being doctored in any way. If, however, the cattle-post is near enough to the village, the flesh of the calf may be brought in for the old women of the cattle-owner's family. When a pregnant cow dies, no one may eat of its meat except the boys and old



people. The foetus is removed from the body, and given to the aged men and women. Married men may also not eat the afterbirth (*mothlana*) of cows or drink the beestings (*kxatsele*), lest the animals abort. The afterbirth may be eaten by the boys and old men, but must on no account be given to the dogs, lest the cattle diminish, go astray and never be recovered, or meet with some other misfortune.

#### RITUAL AVOIDANCE OF THE CATTLE

There are further many usages of a more general nature whose observance is necessary in order to ensure the wellbeing of the cattle. Among these are several connected with the sexual life and physiology of human beings. In the olden days it was taboo (*moila*) for women to have anything to do with the cattle. They neither herded nor milked them. When the plough was introduced, and it became necessary to harness the oxen, the men for the first time began to take a more active part in the agricultural routine, simply because the women were still debarred from handling the cattle. Conditions have now changed to such an extent that this old taboo, one of the most widespread in pastoral Bantu society, no longer operates amongst the *Bakxatla*. Women, save for certain reservations, are no longer prevented from working with cattle. It is quite common at the beginning of the ploughing season to see a woman behind the plough, or leading the oxen while her husband guides the plough. Moreover, men who have no sons to look after their goats and sheep will employ their young daughters as herdgirls. As far therefore as the ordinary contact of women with cattle is concerned, there is no longer any prohibition.

But there are certain categories of women who must still avoid the cattle. Girls and women often go out to the cattle-posts in the late summer and autumn to live upon the fresh milk. As long as they are still newcomers from the village, they have nothing at all to do with the cattle. It is said that their bodies are still "hot" with the scent of the village and of sexual life, and will therefore affect the cattle and cause them to abort. After some time, however, generally about a week or so, these girls may help with the milking and herding. Husband and wife may not cohabit as long as they are at the cattle-post, unless their sleeping enclosure is a good distance away from the cattle pen. Should they violate this injunction, it is held that while they are copulating the cattle will make a hole in the fence of the kraal and escape, and when they come back one of the beasts will be lost for good. Also the cows will suffer from contagious abortion. Girls when menstruating, and girls who lead a loose sexual life, are for the same

reason not allowed to drink milk. Their bodies are said to be "dirty" (maswê), and by drinking the milk they will injure the cows from which it comes.

Again, women may normally enter kraals in order to gather the dung of the cattle, which is used as fuel and for smearing the floor of the dwelling enclosure (lapa). But once the kraal has been doctored, they may not enter it when the cattle are inside, lest they undo the effects of the doctoring. An instance of this came under my observation at Mochudi. A kraal in which oxen were usually kept was free at one time to the women, even when the cattle were inside it. Then the cattle were attacked by disease, and the kraal was doctored. After that the women were told not to enter it as long as the cattle were inside. This restriction applies more particularly to women who are pregnant or menstruating. Women and nubile girls are also not supposed to walk through a herd of goats or sheep, since if they are pregnant or menstruating they will cause the animals to sicken or abort, while the fruit in their own wombs will also die. This rule is no longer strictly observed by all the Kxatla women, but I have often seen women wait to let some goats pass by them before crossing to the other side of the road, or else drive all the goats to one side so that they should not have to pass between them.

The same restriction on coming into contact with cattle applies to a man whose wife has recently died. Until he is finally purified he may not go to the cattle-posts nor pass between a herd of cattle, lest he contaminate them with his impurity and so cause them to sicken or die. Nor may he go to any cattle-post for the first time after his bereavement, even if he has already been ceremonially purified, unless he carries with him some *moxaxa* bulbs (*Amaryllis* sp.). These he must peel as he goes along, throwing the peels on the ground, especially where two roads cross. Unless he does so, all the cows he passes on the road will abort. At the cattle-post he must throw *moxaxa* in his own kraal and in those of his nearest neighbors. Then he can once more accompany the cattle when they go out to graze, but the first time he does so he must still take some *moxaxa* with him and peel it as he goes along. So, too, the lover of a girl who has miscarried must use *moxaxa* on his way to the cattle-post and in the kraal. Then he must wait a few days before he can drink milk, and this milk must be from the cattle of his own post only. It is not till after a month or so that he may drink milk at any other cattle-post. The observance of these usages is nowadays largely a matter of individual taste, but many of the Bakxatla firmly believe that unless they are strictly carried out the cattle will suffer.

## BELIEFS RELATING TO CASTRATION AND TAMING

It is said also that a man who sleeps habitually with his hands between his legs is not suited for castrating young bulls or taming young oxen, and that the meat of animals slaughtered by him will not be tasty. Young oxen must be trained by men who are clever, energetic and cunning. Not just any man can be employed, because he might be lazy or bad, and then the oxen will be useless even after they have been broken in. The small herd-boys on cold winter nights sometimes sleep with their hands between their legs, but if found doing so the old men will whip them and warn them against the practice, saying that it will make them lazy and cause their cattle to be lazy as well. Boys must sleep with their arms extended, so that when they "catch" the oxen they can "catch" good, smart oxen.

Castration must also be performed by special men. Some men are said to have "bad hands" (*ba matsôxô a bothloko*) because they have stayed too long in the villages and have cohabited too much with women. Men who come to castrate cattle must spend at least a full day in the cattle-post before they start their work. It is said that their arms are still "hot" (*mabôxô a sale bollo*) from the village. No special rites appear to be observed in castrating the young bulls. The testicles which are removed are generally either eaten by the boys or given to the dogs. It is taboo for women to eat them, lest they become over fond of sexual intercourse as a result!

But young bulls may not be castrated at a certain time of the year. As soon as the first crops of the new season are visible above the ground, about the beginning of December, and until the corn begins to ripen, about the end of April, it is taboo for any man to castrate his young bulls. He must wait until at the end of this time the chief sends out specially to have the young bulls at one of his cattle-posts castrated. The people are then informed that the chief has castrated his bulls, and they may now begin to do so too. During the same period it is also taboo to kill bulls by day. They may be killed at night only, and then permission must first be obtained from the chief. The entrails of these bulls may not be eaten, but must be buried in a hole in the ground. It is said that violation of these taboos will "spoil the year" (*xo senyêxa ngwaxa*). Hail will fall instead of rain, the ears of the corn will close up and twist about, and the stalks will fail to grow properly. This taboo on castration and the killing of bulls is only one of many connected with the agricultural season, and is primarily intended to ensure the wellbeing of the crops. But it is also said that if a man castrates his young bulls before the chief has done so, the animals will all die.

## OMENS RELATING TO CATTLE

The behavior of cattle in certain instances is regarded as ominous. If a cow lies on the ground and curls its tail (*xo xara*), and then beats it on the ground continuously, the Bakxatla say *e ya thlôla*, "it forebodes evil." Unless it is caught and quickly killed, the owner or one of his relatives will die; but the cow's death will avert the danger. It is looked upon as a sacrifice (*sedimô*) for its owner's health and life, and as they kill it they say, *se ê nayô, mayô sebono*, "may (the evil) go with it, its mother's anus" (an expletive). This cow (*sethlodi*, an evil omen) is generally killed and eaten without being doctored. Occasionally it may be sent to the trader's store to be sold, but this does not help very much, as so long as it is alive it will still "curse" (*thlôla* or *hutsa*) its owner. Sofonia Pôônyane told me that a few days before the death of his father, one of his cows was heard beating with its tail on the ground in the kraal, but at the time no special notice was taken of this. The episode however was recalled when Sofonia's father died. Then when his sister also died about a year later, it was noticed that about this time the same cow had again been beating the ground with its tail. The animal was thereupon taken out of the kraal and shot, its flesh being afterwards eaten without any special doctoring. Again, if a cow drinks its own urine or bellows like a bull, it also forebodes evil, and must be killed in order to avert the danger.

A calf born with two heads (*namane e thlôxô dipedi*) is also regarded as unlucky and killed. It is such an unusual event that the magician is specially consulted to determine whether it can be attributed to sorcery. According to one informant, only the calf is killed, not its mother; but another said that when such an event happened at his cattle-post the magician ordered both mother and calf to be killed, lest the whole family of the owner begin to die off. The flesh of the cow was eaten, but the calf was buried. The people were afraid of it, and said that it was not a proper "gift" (*mphô*) from God. If a cow gave birth to twin calves in the olden days, the owner would kill one of them, to avert the evil that was threatened; but the interpretation of such an event has apparently changed considerably, for nowadays it is held that it signifies wealth: the owner of the beast will get lots of cattle. It may be noted in this connection that the presence of many flies round the milk-sacks hanging in the sleeping enclosure is held to indicate that the owner of the kraal will have many cattle; and it is said that if the man kills any of these flies he is lessening the number of his cattle. The story is told of a man who in conversation with chief Lentswe casually complained that there were too many flies at his cattle-

post. Whereupon the chief remarked, "If that is so, I'll take all the flies away," and he sent some of his men to confiscate all the cattle at that post! This he did because the flies were due to the presence of the cattle, and the welfare of the latter was dependent upon the measures taken by the chief to produce rain. By complaining about the abundance of flies, therefore, the man was held to be indirectly showing ingratitude towards the chief in his capacity as tribal rainmaker!

#### GENERAL REMARKS ON THE RITES

If we review the various rites and beliefs described above in connection with the herding of cattle, it will be seen that the major magical rites fall into four more or less distinct classes: the strengthening of the kraal (xo thaa lesaka) by means of doctored pegs; the promotion of fertility in the cows and the bull (xo thusa dikxomo) by means of sprinkling or the direct application of medicines; the general safeguarding of the cattle (xo alafa dikxomo) by means of burning medicinal mixtures (leswalô); and finally the inoculation of the herdboys (xo thswara badisa) with magical ointment (thsithlô). The use of pegs smeared with magical ointment is a common element in all rites connected with the establishment of new places, e.g., in building a hut or household enclosure (lapa), or in making a new garden; and in every instance its purpose is the same. The ointment with which the pegs have been smeared protects the place against the activities of the sorcerer and "fights" against his medicines. The inoculation of the herdboys with ointment is similar in function. Any man who fears that he may become the object of sorcery will be inoculated in the same way by the magician; and the ointment put into his body will counteract the medicines with which the sorcerer tries to bewitch him. The other rites are more specific in their application, and in the forms described above appear to be restricted to cattle only. It may be noted, however, that in the rainmaking ceremonies of the Bakxatla one of the first rites performed is to send immature boys and girls to sprinkle the gardens with medicated water, and that the object of this rite is to ensure an abundance of crops through an adequate supply of rain.

In only one of these four classes of rites, those specially connected with fertility, does the spell appear to be of any importance. It is possible that on this point my information is somewhat defective, and that actually the spell does figure more prominently in Kxatla magic than I have been led to believe. On the other hand, I have been positively assured by reliable informants that the spell does not invariably accompany a magical rite, and I have myself witnessed a number of rites which were performed in absolute

silence. Rapedi Letsêbê, one of the leading magicians of the tribe, whom I questioned closely on this point, said scornfully: "My medicines are good enough; I don't need words to strengthen them." The general term for spell is *tiisô*, from the verb *xo tiisa*, to make fast; and this name indicates fairly adequately the rôle of the spell in Kxatla magic. It is something which gives additional potency and direction to the medicine, and according to Rapedi it is only when the magician is not very sure of his medicines that he reinforces them with a spell.

The medicine is the really important thing in Kxatla magic. In all their magical rites, the people rely primarily upon the medicines. There is a certain general method in which these must be applied, but the details are not rigidly fixed, as will be seen, e.g., from the variation in the rites used in the strengthening of the kraal, it does not really matter just how the ointment is applied, so long as it is either buried in the kraal or smeared on the fence. Again, while most of the ritual is performed in the first instance by the magician, once he has finished he leaves his medicines behind with the herdboys and tells them how to carry on. This feature is characteristic of Kxatla magic in general. Sometimes the magician does not even perform the rite himself in the first instance, but simply sells his medicines to the layman with instructions what to do. I was once visiting a magician at the village of Sikwane, when a man came up to buy some *mothusô* for his garden. While the magician was fetching the medicine from his hut, I asked the man what he was going to do with it, and he described to me the method in which he was going to apply it. As soon as he left, I asked the magician how the *mothusô* should be used, and he gave me an altogether different account. I thereupon told him what I learned from his customer, but he simply remarked, "*xa se sepê*, that doesn't matter, so long as he puts the *mothusô* in his garden." The fact is obvious that for its efficacy Kxatla magic depends essentially upon the use of the right medicines. The inherent properties of such medicines I was able to discover in connection with some other forms of magic, but my informants either could not or would not state just why they used certain medicines in preference to others when they were treating cattle. The general reply was either that they had been taught to use these medicines, or else were shown them by their divining bones! It may also be noted in this connection that the magicians differ a good deal amongst themselves in regard to the medicines they use for the same purposes. I have, e.g., no less than seven different recipes for the mixtures used with the *mothusô* for crops.

Another point which has recently been stressed in theoretical discussions of magic is the condition of the performer. On this point the Bakxatla

say with regard to cattle magic that the only taboo to be observed by the magician is that on sexual intercourse. Some magicians when called upon to perform an important rite "doctor" themselves as a precaution against sorcery, but here again I was told that only those not quite sure of their powers would do so. The more famous magicians with whom I discussed the subject stressed only the taboo on sexual intercourse, which held good as long as they were actually engaged on the rite. In some forms of magic, e.g., the destruction of agricultural pests, the taboos to be observed by the performer are much more elaborate, but on the whole such instances are exceptional.<sup>4</sup>

The rites associated with the recovery of stray cattle and the treatment of cattle diseases are fairly straightforward, and follow the general pattern of Kxatla magic. Of the other observances, it will be seen that some relate to certain human states which are held to affect the cattle adversely. Widowers and menstruating or pregnant women are in a condition of ritual impurity, during which they are a source of danger to various categories of people, animals or objects with which they would normally come into contact. The taboos imposed upon them refer not only to cattle, but also to human beings, especially to those who are sick or confined in child-bed, to the gardens, and to various other objects. They need not therefore be specially considered here, except in so far as they indicate that the Bakxatla believe the wellbeing of their cattle to be bound up with the avoidance of any ritually contaminated influences. The prohibition of sexual intercourse at the cattle-posts and the associated beliefs regarding newcomers from the village and the men who sleep with their hands between their legs are perhaps reminiscent of the time when it was taboo for women to have any contact at all with the more important domestic animals. This taboo, as we have seen, has now been considerably modified, but the act of sex and anything associated with it is still held to be injurious to the cattle. Just as in certain of the rain ceremonies and in magic in general sexual purity is a necessary condition of the performers, so it is demanded from those upon whose activities depend the wellbeing of the cattle.

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<sup>4</sup> I hope to discuss more fully in a later publication the general structure of magic amongst the Bakxatla. I am not satisfied that I have learned all there is to know about the subject, and the analysis given above must therefore be regarded as of a preliminary character.

WHENCE do we come? Where did the Eskimo race originate? (or the Aryan?) Knud Rasmussen approached this problem with respect to the Eskimos. All through his life he felt a child of the Eskimos; and so, to a certain degree, he was. His mother, née Fleischer, was the issue from a Danish-Eskimo marriage. In features and general appearance she was the picture of a handsome Eskimo woman. Since our colonization of Greenland mixed marriages have not been very rare occurrences and have as a rule proved to be successful in so far as they are generating efficient individuals well fitted for the process of blending the Eskimo culture with the white man's foreign element. Knud Rasmussen himself set the example.

Knud Rasmussen was proud of his Eskimo blood. He was born in 1879 in the most important town of north Greenland, Jakobshavn, by the natives named Ilulissat, "the ice mountains," because here the surface barrier shoots some of its proudest projections towards the coast. His father, Christian Rasmussen,<sup>1</sup> lived in an ancient wooden vicarage, filling the post of "missionary" under the Danish state-church, an office dating back to the earliest days of the Danish mission in Greenland. At his time, however, the natives on the west coast had long been christened and civilised, everywhere enjoying proper school-teaching, but due to their extreme isolation they had preserved many old traditions. Later on the Greenland parson was called to the pastorate of Lynge, district of Kronborg, North Seeland, and his two sons were put into the public school at Birkerød, remaining there until they were entered at the University of Copenhagen. It was only here at the Birkerød school that the boys learned to read and write Danish properly. Consequently Knud Rasmussen spoke the Eskimo language before he learned Danish. His childhood's playmates were the Eskimo children in the "Ice-mountain town." He grew up surrounded by Greenland scenery and language, and listened early at his homestead to the Eskimo tellers of legends. And quite back to these early years dates his life's dream of going up far north to the small pagan tribe in the northernmost corner of Greenland, to visit the Polar Eskimos near Cape York (Ivnâng-aneq) and Smith sound. In Jakobshavn they were known only through tales handed down by tradition.

The dream of his youth grew along with himself and his life's biggest achievement was as a matter of fact his sled expedition north of Canada to

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<sup>1</sup> Pastor Christian Rasmussen, who lived in Greenland 1873-1895, was known as the author of a "Gronlandsk Grammatik" and a "Dansk-Grönlandsk" dictionary (Kobenhavn, 1893).



the Western Eskimos at the Bering straits. After this conquest he embraced the whole of his people's extensive world, not only from a geographical point of view but by way of personal experience.

He wasted no time on academic studies. Already at the age of twenty-three he succeeded in getting his wish fulfilled of visiting the Polar Eskimos, when the Danish author and journalist Mylius-Erichsen took him along on



*Knud Rasmussen*

his first expedition, the "Danish Literary Greenland Expedition" (1902-04), following the west coast straight up to Cape York. The successful progress of this expedition was surely due to a great extent to the young enthusiastic interpreter's knowledge of the vernacular. Among the Polar Eskimo Knud Rasmussen spoke his mother's tongue. He alone was able to understand them and make himself understood. Compared to him Robert

Peary was a stranger amongst these people. Shortly after his return he wrote the book which was destined to establish his reputation as interpreter of these strange people, *Nye Mennesker* (Kobenhavn, 1905), or in English, *The People of the Polar North* (London, 1908).

Immediately after the publication of this book Franz Boas designated it "this interesting collection of data contained in the fascinating description of the Smith Sound tribe,"<sup>2</sup> pointing out, on the basis of this collection, a great many legendary "motifs" as variants of legends well known in the Hudson bay area. At the same time Boas found herein support for his hypothesis of the intimate connection between the peoples of north Greenland and Hudson bay.

In 1910 Knud Rasmussen, together with P. Freuchen, founded the "Arctic Station of Thule," a combination of commercial station and scientific base for expeditions. Hereafter he designated all his expeditions as "Thule Expeditions."

As to results,<sup>3</sup> we have before us a long succession of journeys:

1. The first Thule Expedition established finally the non-existence of Peary channel and mapped out the land connecting Greenland and Peary land.

2. The second Thule Expedition mapped the most northerly coasts of Greenland and explored them from a geological, botanical, as well as ethnographic point of view.

3. The third Thule Expedition: the laying out of depôts for Roald Amundsen.

- 4-6-7. The fourth, sixth and seventh Thule Expeditions took up ethnographic-folkloristic investigations of the isolated tribe at Ammassalik in east Greenland; extending beyond what had been earlier achieved by G. Holm and others after him, and Knud Rasmussen brought, as a matter of fact, not a few new results to light.

In 1932 and the following year he continued his explorations along the southern part of the east coast, the last of these journeys being tragically interrupted by his death (December 21, 1933).

Between the fourth and sixth Thule Expeditions Knud Rasmussen found time to prepare his fifth expedition, lasting three years (1921-24) and stretching its field of exploration far beyond Greenland.

<sup>2</sup> F. Boas, *Eskimo of Baffin Land and Hudson Bay* (Bull. Amer. Mus. Natural Hist. 15: 567, New York, 1907).

<sup>3</sup> Compare also the Danish work *Grønland I*: 567, in *Meddelelser om Grønland*, 60, Kobenhavn, 1921, and the publication in English of *Greenland* (3 vols., Kobenhavn, 1928-29).

It was after his return from this voyage that the University of Copenhagen created him a Doctor h.c. (Ph. D.). In his speech in reply at the ceremony Knud Rasmussen quoted the well known words by Rasmus Rask, appropriating them to himself: "*Sit Fædreland skylder man alt hvad man kan udrette.*"<sup>4</sup>

Not considering himself a man of natural science, Knud Rasmussen attached to his expeditions specialists within the sciences of geology, mineralogy, zoölogy, taking upon himself the task of folklorist and geographical explorer. He had the knack of choosing the right men as his fellow-workers; I need only quote three names: Therkel Mathiasen, Birket-Smith and Lauge Koch.

As to geographical science and especially the filling up of the map of Greenland, Knud Rasmussen's travels are of lasting consequence. The northwestern and southeastern coasts of Greenland have become better known than they were prior to his and his fellow-travellers' researches on the spot.

To his own proper field of observations pertained the collection of popular legends (folklore), because he better than anyone else mastered the Eskimo language. A theoretical perception of the language, in a linguistic sense, he did not possess. But with his wonderful practical command of the language and his faculty of grasping, humanly and intuitively, the problems laid before him, he succeeded in penetrating deeply into the spiritual life of the natives. His ability was in constant growth. In that publication of his early days, *Nye Mennesker*, he had satisfied himself with rendering what the Eskimos had told him and jotting down a translation of the legend he had just heard. But in his big work in English he availed himself of the much more exact method of recording the Eskimo texts as dictated and afterward translating them.

This long trip resulted in a series of popular books from Knud Rasmussen's hands, that is to say, popular in style but in reality enriching folkloristic science and national psychology with surprisingly novel material. I cite especially the following three books: *Fra Grønland til Stillehavet* (2 vols., København, 1926; in English translation, *Across Arctic America*, New York, 1927<sup>5</sup>), *Festens Gave* (1929), and *Snehytens Sange* (1930).

Human documents and specimens from the world of the Inuit; books filled with old legends and primitive poetry; a find for everybody searching for pictures of primitive or exotic peoples' individualities, more especially of

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<sup>4</sup> "To your country you owe all in your power."

<sup>5</sup> Also translated into German and French.

Eskimo mentality. The strength of these books lies in the intimate perception of which they bear witness, being closely connected with the author's special relation to the language and to his artistic temperament.

Having dealt with these minor publications I am now approaching the chief point: the main result of the long trip was intended to be a magnificent publication in English (*Report of the Fifth Thule Expedition, 1921-24*<sup>6</sup>), comprising twelve volumes—Topography, Geology, Botany, Zoölogy, Anthropology, Archaeology, Ethnography, Language, Folklore—based on the collected material.

According to the plan formed for this grandly conceived work Knud Rasmussen himself was to describe the spiritual culture of the western Eskimo tribes, whereas his collaborators, Kai Birket-Smith and Therkel Mathiassen were assigned the field of material culture (ethnography and archaeology) pertaining to those tribes they might investigate. Some of the tribes living west of Hudson bay ("the Central Eskimo") had till then hardly been known except by name (and the name of the Kinipetu tribe was even founded on a perfect miscomprehension, the real name of the tribe being Qaernermiut). As a result of Knud Rasmussen's publications we now have full information as to the following tribes from south to north along the west coast of Hudson bay: Aivilingmiut, Amitjormiut, Iglulingmiut<sup>7</sup> at the coast, the Caribou Eskimo inland, Netsilingmiut, Ilivilemiut and Utkuhikjalingmiut next to Hudson bay on the north coast of Canada; farther west we meet Umingmaktormiut, the Copper River and Mackenzie River Eskimo, and finally in the extreme west the various tribes of Alaska and Bering Strait Eskimo.

As the work progressed Knud Rasmussen succeeded in publishing his records from the Iglulik, Netsilik, Caribou, and Copper Eskimo, but he also collected material among many of the more westerly tribes straight across to the Far East. He did not live to see these results published, but it is to be hoped that they will be taken in hand by his collaborators. In other volumes of the work the ethnographers have dealt with the material (and in part the spiritual) culture of the Central Eskimo and Chipewyan Indians.

This main work is of a more scientific structure than Knud Rasmussen's previous publications. Its folkloristic volumes, concerning the Western Eskimo, augment the comprehensive collection of legends from Greenland,

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<sup>6</sup> With the sub title *The Danish Expedition to Arctic North America in charge of Knud Rasmussen*. Ph D (Gyldendal, Copenhagen).

<sup>7</sup> The suffix -miut means "the inhabitants of," -ling, "the country or place which possesses", therefore, "the inhabitants of the country (place) possessing walrus, iglu, house or houses, seal, pot-stone, etc."

of which altogether three volumes appeared in Danish translation: *Myther og Sagn fra Grönland* (Myths and Legends from Greenland, 1921-25: a fourth volume was planned).

The method applied is invariably the same: going straight to the sources by aid of his inborn knowledge of the native language, Knud Rasmussen collects his material according to a certain plan or a series of problems by befriending such of the natives within his various fields of observation as were found to be most useful to him. Whenever possible he takes down the texts in the original language, whereupon the translation into Danish (and later on into one of the universal languages) winds up the work. That Knud Rasmussen fully realizes the difficulty connected with transplanting the Eskimo train of ideas and imagination in the soil of European languages is a matter he often recurs to when referring to his method of work. In the Eskimo language one meets with modes of expression that are almost untranslatable, chiefly because so many concepts and subordinate notions are supposed to be obviously evident and familiar.

It is so much more fortunate that Knud Rasmussen gradually acquired the routine of publishing his texts exactly as he took them down from the lips of the Western Eskimo, inserting the translation between the lines.

It will doubtless strike the observer that the Eskimo text in these books occupies a far smaller space on the line than the corresponding English translation. Also that many words are very long and have to be rendered—not by two or three—but by six to eight words in our languages. As to texts gathered at a long distance from Greenland, the difficulty of translating correctly increases on account of dialectical disparities, growing in proportion to the distance, and just for this reason these minutely recorded original texts become so very valuable.

From D. Jenness' folklore notes of earlier date we are acquainted with other Eskimo dialects spoken in the regions north of Canada. So we have now the possibility of basing a critical collation on Jenness' and Rasmussen's texts. We shall perhaps be able to compare Knud Rasmussen's interlinear texts with those of Jenness and to control his phonetic renderings which, however, in my opinion, are quite properly spelled. Also in another direction he reveals a more mature comprehension and critical sense, namely when dealing with the actual interpretation of the innumerable customs and social forms peculiar to the natives in widely separated parts, the ethnographic collections not to be forgotten.

Knud Rasmussen is an interpreter of the highest quality; he is the instrument elect; the clear mirror of his soul reflects his Eskimo spirit blended with his European mentality.

In this respect I am happy to share the views of the leading French ethnologist, M L. Lévy-Bruhl, who wrote a critique of Knud Rasmussen's last work. Speaking of his personal qualifications and method he writes: "These communications from conjurers (shamans) and singers of the Iglulik and Netsilik tribes, revealing their faith and spiritual life, are quite unique documents among the results of ethnology up to the present day;" and further: "K. Rasmussen's works concerning the Eskimos are as epoch making as those of Spencer and Gillen related to the Central Australian tribes."<sup>8</sup>

The works of Knud Rasmussen are *primary* sources, valuable in the first instance for Eskimology, but in a wider sense for those humanistic sciences which make use of such subjects.

One might ask whether any *comparative* research has been attempted in these works, and here we are forced to admit, that within the Eskimo area Knud Rasmussen himself has only quite sporadically tried his hand at it; but it is to be presumed that he would have approached this problem if he had been permitted to live and complete his task.

Examining his works we find that we are dealing with material gathered in the course of his travels from place to place and then classified; in other words first hand material, the working of which has been limited to a mere grouping in chapters and to the translation itself.

As regards the translation and the choice of subjects, the question arises whether the author can be said to have employed any *discrimination* as to his sources. This question may well be raised in spite of the fact that we are dealing with sources not of a literary but of a verbal nature, but here again it must be recalled that Knud Rasmussen is bound up to such degree with these bearers of tradition, who are his very sources, nay by force of origin being himself one of those bearers of tradition. He was doubtless animated by the same responsibility, by the same desire of carrying on their ancestors' traditions as unaltered as possible, neither adding nor subtracting anything.<sup>9</sup>

His critical method of working the Eskimo material takes the form of a positive selection of new variations, gathered here and there, in the unremitting hope, of course, of finding hitherto unknown (not recorded) subjects ("texts"), besides applying a never slackened, constantly more

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<sup>8</sup> The critique appeared in Danish in Berlingske Tidende (June 8, 1931); corresponding utterances about Knud Rasmussen are to be found in Lévy-Bruhl's recently published work *Le surnaturel et la nature dans la mentalité primitive* (1931), p. xxi.

<sup>9</sup> This principle, dominating his method of translation, he mentions on various occasions: "I have only permitted myself the fewest possible linguistic liberties" . . . etc. (Introduction to *Myster og Sagn*, ii).

exercised effort to coin adequate expressions for his translations; because only in this way can he reveal his finds and his Eskimo knowledge to international science, which makes use of these things. In order to attain this point, he was anxious to collect as varied and as genuine text material as possible and to take it down exactly as he found it.

A modern feature in his research is his method of individualistic description, that is, his portrayals and biographies (autobiographies) of individual, momentous, or peculiar characters.

Who can ever forget his description of the shamans Igjugarjuk, Aua and Orulo, Takarnâq and Padloq, Igsivalitaq the outlaw, Anarqâq with his spirit drawings, Hêq and Tatilgak, and many others?

Care must be taken, however, not to generalize everyone of these people's words or distinctive features. There exist as great individual differences between these people as between ourselves. And yet they impress us as being a separate national type widely distinct from our own.

For the scrutinizing scientist there will, to a certain degree, be a question of confidence in making use of the recorder's choice of subjects, his translations and comments. A free translation will always be influenced by the man's personal style of writing.

As to Knud Rasmussen's method and style, it would be difficult to exert any authoritative control if we possessed texts in the original language from his hands alone. But we have at our disposal rather obvious parallels within a certain group of legendary subjects and within certain Eskimo tracts:

From Thule (Cape York and Smith sound), A. L. Kroeber's records (of 1899) originating from Peary's Eskimos;<sup>10</sup> from Baffin land and Hudson bay in the publications of Franz Boas;<sup>11</sup> from the Copper Eskimo in the books of D. Jenness,<sup>12</sup> from Alaska in E. W. Nelson's important work: *The Eskimos About Bering Strait*.<sup>13</sup> All these books have their importance and merits over against those of Knud Rasmussen: Jenness' works are especially valuable on account of his linguistic and—in co-

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<sup>10</sup> Kroeber in *Journal of American Folklore*, 12 (New York, 1899-1900); cf. *Meddelelser om Grönland*, 40:207-10.

<sup>11</sup> F. Boas, *Central Eskimo* (Sixth Annual Report, Bureau of American Ethnology, 1888); *Eskimo of Baffin Land and Hudson Bay* (Bulletin, American Museum of Natural History 15, 1901-07), also *Journal of American Folklore* 7 (1894), 10 (1897), 17 (1904).

<sup>12</sup> D. Jenness, *Life of the Copper Eskimos*, *Songs of the Copper Eskimos*; *Eskimo Folklore* (Report, Canadian Arctic Expedition, 1913-18, vols. 12-14).

<sup>13</sup> E. W. Nelson, *The Eskimo About Bering Strait* (Eighteenth Annual Report, Bureau of American Ethnology, 1899).

operation with Helen H. Roberts—musical notes recording Eskimo song texts as well as tunes.

Between them, all these works serve, in a comparative way, as an abundantly substantiated and important counter-balance. On many points, however, Knud Rasmussen's work bears witness to a more profound understanding of, and deeper penetration into, Eskimo mentality. Thus he opened new roads to comparative Eskimo research, a branch of science founded by Danes like Rink, Bahnson, G. Holm, H. P. Steensby. Eskimo research is a young science and the treatment of its problems cannot as yet boast of great results.<sup>14</sup> Knud Rasmussen and his fellow travellers had the fate, though, to run right into a burning problem when they pushed on to the inland Eskimo about the Barren grounds and straightway believed they had struck the primeval Eskimos.

As already mentioned, this hypothesis cannot be said to be entirely new, having previously been suggested by American ethnologists (J. Murdoch, F. Boas), but the Danish explorers tried to go deeper into the question, following the lead of our countryman, H. P. Steensby, who had chosen this problem as the subject for his thesis for a Doctor's degree, *Eskimokulturens Oprindelse* (Köbenhavn, 1905; a revised edition in English appeared in *Meddelelser om Grønland*, 53). The problem as to which tribe is the most primitive or the problem regarding the descent of the Eskimo is still an unsolved one.

It is a tempting, but by no means an easy task, to compare Knud Rasmussen to previous Eskimo explorers, as for instance, Rink and Steensby, or to an exact naturalist and ethnographer as that old Greenland missionary Otto Fabricius. But Knud Rasmussen within his own field managed to coin almost equally concise expressions for his observations. Within the field of folklore he is hardly on the level with a describer as exact as Otto Fabricius, but then it must be remembered that their respective fields were extremely different, not to speak of the diversities between their personal characters.

In his research Knud Rasmussen was always endeavouring to give expression to his individual sense of realities. His translations were bound to bear the stamp of his personal style of writing. His aim was to be realistic and at the same time to be in the closest possible contact with the Eskimo

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<sup>14</sup> Axel Olrik at one time dealt with a problem from Eskimo cosmology embodied in his big study on *Ragnarokforestillingernes Udspring* (The origin of the conception of Ragnarok) (*Danske Studier*, 1913, pp. 234–47; German translation *Ragnarök, die Sagen von Weltuntergang*, Berlin and Leipzig, 1922)



train of thought. In order to imitate the spirit, tone, and imagination of Eskimo poems and legends he had to exorcise his Eskimo soul and turn European.

He had not passed through any academy of science but, almost shaman-like, he had trained at his special art, the art of spiritual communication taken into the service of truth.

There can be no doubt that Knud Rasmussen enriched science concerning Greenland and the northernmost peoples of the world. His research was so far congenial with scientific research that his results may be considered as scientific while at the same time sensitive and imaginative. At his most untimely death Greenland and Eskimo research has suffered a painful loss.

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## REPORT

### ARCHAEOLOGICAL FIELD WORK IN NORTH AMERICA DURING 1933

During 1933, forty-two organizations sent sixty-three archaeological expeditions into the field in North America. There were in addition a number of other organizations which collaborated with those mentioned above. Still others did not attempt to support organized field parties, but encouraged individual members to undertake private investigations. According to the records of the Committee on State Archaeological Surveys, fifty-nine organizations were interested in one way or another in the archaeological field work done in North America in 1933.

Alaska has been the scene of important archaeological discoveries during the past few years. This year two parties were in the field. Otto Wm. Geist, of the Alaska Agricultural College and School of Mines, returned to St Lawrence Island to continue the examination of the village site at Kukulik. The materials found in completing the cut through the kitchen midden add to our knowledge of several of the cultures of this region. The University of Pennsylvania Museum sent Frederica de Laguna to Prince William Sound to take part in a joint expedition with the National Museum of Denmark, represented in the field by Kai Birket-Smith. The materials found can be correlated with the Third or last Period of the Kachemak Bay culture, although influences from the Northwest Coast Indian cultures are apparent.

In the northwestern states, a region relatively unknown archaeologically, two field parties were at work. L. S. Cressman, of the University of Oregon, made a survey of the petroglyphs in the desert region of south central Oregon, and later excavated two mounds in the southern Willamette valley. In Montana, Melville Sayre of the State School of Mines at the University of Montana surveyed the tipi rings and the so-called "game drives" or "prayer lines" found in that state.

On the west coast of the continent a field party from Sacramento Junior College began excavations at a Nisenan Indian village site in eastern Sacramento county. The stratified deposits exposed in an exploratory trench revealed occupational debris, a number of skeletons, and two house floors. The active group of institutions in southern California confined their field activities largely to survey work. The Southwest Museum continued the survey being conducted from its Desert Branch. The Los Angeles Museum sponsored a survey of Los Angeles and Ventura counties. The San Diego Museum sent a party into Lower California to do survey work, and late in the year excavated a Digueño cremation-cemetery in eastern San Diego county.

The southwestern United States continued to be the scene of the greatest archaeological field activity. As in previous years, both survey work and detailed excavations were carried forward. Two groups continued the search for further evidence of ancient man. On the eastern border of the area E. B. Howard, of the University of Pennsylvania Museum, examined some old lake beds near Clovis, New Mexico, finding evidence which clearly indicated contemporaneity of man with the extinct bison and mammoth. On the western border of the area, M. R. Harrington spent a month in the fall investigating a deposit of apparently mixed Pleistocene animal and human character associated with an ancient lake in the vicinity of Las Vegas, Nevada. Other parties from the same organization working in Nevada explored a small Basket Maker village at the mouth of the Virgin river, and a small Pueblo site in the Moapa valley. The close of the year found M. R. Harrington again in the Moapa valley directing archaeological work being done by the CCC camps.

In the northwestern part of the area, Albert B. Reagan, of the U.S. Indian Field Service, continued his archaeological studies in the Uintah basin. The Peabody Museum of Harvard again sent J. O. Brew to the Alkali Ridge district in southeastern Utah. The excavation of a single large site this year completed the field work for this project. Farther south, in the little known region of northeastern Arizona and southeastern Utah, a reconnaissance was conducted by the Rainbow Bridge-Monument Valley Expedition, organized by Ansel F. Hall of the National Park Service. The archaeological work, directed by L. L. Hargrave, included locating and examining some 200 sites. In this same region Douglas S. Byers, representing the Peabody Museum of Harvard, excavated a cave near the Arizona-Utah line, which had been occupied continuously from early Basket Maker to Pueblo II times. To the east, over the Colorado line, Paul S. Martin of the Field Museum resumed his detailed study of the Lowry ruin northwest of Cortez, Colorado.

The Museum of Northern Arizona, which has been concentrating on the archaeological problems of the northeastern part of the state, in addition to lending Hargrave to the Rainbow Bridge-Monument Valley Expedition, undertook two field projects during the year, namely: a partial excavation of the Pueblo III ruin of Wupatki near Flagstaff, and the continuation of the archaeological survey of the San Francisco mountains and the Hopi country. Farther south in the upper Gila region, partly in New Mexico and partly in Arizona, a number of field parties were at work. In the spring Frank H. H. Roberts, Jr., returned to Allantown, Arizona, to close the work done at a nearby site during the past few years under the auspices of the Bureau of American Ethnology. After July 1, he remained at the site, on furlough from the Bureau, in order to take charge of the archaeological field training group from the Laboratory of Anthropology at Santa Fé. During the ensuing eight weeks a small Pueblo I village was examined. Over the state line, near Coolidge, New Mexico, Harold S. Gladwin, of Gila Pueblo, excavated four units of a village ruin which revealed architecture and pottery of the Little Colorado culture. Late in the fall, the Carnegie Institution of Washington and the Peabody Museum of Harvard cooperated in sending Mr and Mrs C. B. Cosgrove to Cloverdale, where they examined a nearby adobe-built pueblo which contained evidences of a mixture of Chihuahua and Middle Gila cultures.

For several years Gila Pueblo has been sponsoring an extensive archaeological survey. This year its staff members went into Mexico to extend the record in Chihuahua south to the Durango border and west to Sonora. Other members of the staff excavated a pit-house village in the San Francisco valley. Students under the direction of Byron Cummings of the University of Arizona studied at several ruins during the year, the most important of which were the Fitzmaurice ruin near Prescott, and Kinishba, near Fort Apache. Odd S. Halseth, of the Archaeological Commission of the City of Phoenix continued the development at the Pueblo Grande ruins.

In the Rio Grande basin, the School of American Research of the Archaeological Institute of America, in cooperation with the University of New Mexico and the New Mexico State Museum, continued its field program by sponsoring excavations for the sixth season at Battleship rock in the Jemez, and for the fifth season at Chetro Keti in Chaco canyon. The state archaeological survey inaugurated some years ago by this institution was continued. Likewise the Laboratory of Anthropology at Santa Fé has continued its projects. The archaeological survey of the Rio Grande drainage, under H. P. Mera, secured enough data this season to enable it to bound the extent of the Rio Grande glaze paint wares. Excavations were undertaken at a village site in Chaves county, in two house structures in the upper Chama drainage, and in a rock shelter on the Red river. The Dendro-Archaeological project of the Laboratory, under the direction of W. S. Stallings, Jr., was able to extend the dendrochronological records

back to about 1100 A.D. During the last few weeks of the year staff members of the Laboratory began excavations at the Pueblo III site near Agua Fria, not far from Santa Fé.

Late in the spring, E. B. Renaud of the University of Denver, undertook a second reconnaissance trip in the San Luis and upper Rio Grande valleys in Colorado, visiting new sites and examining collections. Later in the summer he made a survey of the pictographs in the region surrounding Santa Fé. During June and July, students from the Texas Technological College, under the direction of W. C. Holden, excavated the Arrowhead ruin two miles east of Glorieta, finding pottery types of Pueblo III and early Pueblo IV periods.

A number of field parties spent the season in the Plains area. A group from the University of Minnesota continued the investigations of last year, visiting sites near glacial Lake Pelican, and at Lake Mille Lacs in Minnesota, and others in North and South Dakota. Both the University of Nebraska and the Nebraska State Historical Society carried on their investigations of the remains of earthlodges. The former sent out a party which examined two prehistoric sites in Cedar county, under the direction of Earl Bell, which revealed a mixture of Missouri river and Nebraska culture criteria. The latter sent a group, led by A. T. Hill, to central and southwestern Nebraska, where pottery representative of Upper Republican and Nebraska cultures was secured from ten prehistoric earthlodges. E. B. Renaud, of the University of Denver, recorded a number of sites and did some excavation in western Nebraska for the survey of the high western plains which he has undertaken. Farther south, Forrest Clements of the University of Oklahoma excavated some mounds near Wagoner, eastern Oklahoma, which revealed material indicating relations with lower Mississippi cultures. Later in the season he examined a village site near Optima, in the Panhandle, which contained remains of rectangular slab houses. The archaeologically-minded organizations in Texas have been as active as in former years. A field party from the University of Texas spent part of the summer continuing the work of last year among the shell heaps along the coast. Later this institution sent a party to examine mounds near Palestine, in east Texas. E. B. Sayles, on the staff of Gila Pueblo, was also in eastern Texas surveying sites attributed to the Caddoan people. In the central part of the state, members of the Texas Archeological and Paleontological Society recorded data secured while examining stone slab burials. In western Texas the interest centers around the cave deposits. The West Texas Historical Society continued its survey of the Big Bend region, and also studied the deposits in several caves. The Witte Memorial Museum sponsored the work of George C. Martin, whose excavations have furnished a complete representation of what has been styled the "Big Bend Basket-maker Culture."

The interest in archaeological matters has increased in the southern states during the past year. S. C. Dellinger, of the University of Arkansas, in addition to continuing his valiant efforts to curb vandalism in his state, made some interesting discoveries regarding house construction while excavating village sites and cemeteries in Cross and Poinsett counties. Across the Mississippi river, the Mississippi Department of Archives and History sent Moreau B. Chambers to the Gulf coast to continue the archaeological survey which it has been carrying forward for several years. Later in the season, the work was extended up the valleys of the Pearl and Tombigbee rivers. The major undertaking of the Alabama Museum of Natural History was the continuation of the detailed archaeological survey of the state. Field parties worked in the Tennessee valley, the Warrior river region and along the Gulf coast. Peter A. Brannon, of the Alabama Department of Archives and History, trenched a single site near Montgomery, at the request of the U.S. Air Tactical School. The members of the Alabama Anthropological Society continued to excavate and study urn burials as opportunity offered. Similarly, members of the Florida Archaeological Society concentrated their efforts upon several mounds in the vicinity of Tampa. The Peabody Museum of Yale undertook a survey

which included some excavations along the western coast of Florida and in southern Georgia, as a part of a more comprehensive Caribbean project. To the north of this region, the Charleston (South Carolina) Museum has inaugurated a state survey of archaeological sites which has to be carried forward slowly because of lack of funds. However, this institution coöperated with W. K. Moorehead of Phillips Academy, Andover, in excavating sites near Beaufort, South Carolina.

The upper Mississippi valley and Great Lakes region did not witness as much archaeological activity as it has in former years. On the western border, Charles R. Keyes of the State Historical Society of Iowa continued his policy of making short exploratory trips to special parts of the state, resulting in additional data on the Mill Creek, Woodland, and Oneota cultures. Late in the season he supervised restoration work done by CCC labor on mounds in the eastern part of the state. The members of the Wisconsin Archeological Society, under the leadership of Charles E. Brown, continued to record and preserve Indian sites. The most active organization in this area, the University of Chicago, combined survey work with excavations as in former years. The survey of Rock Island county, revealing only Woodland culture sites, was completed and excavations were carried forward in both Fulton and Peoria counties. The Indiana Historical Society sent Glenn Black to continue the survey of southeastern Indiana, which included the excavation of some stone mounds similar to those found by Frank Setzler several years ago. The same institution sponsored E. Y. Guernsey's survey of Clark county. The archaeological evidence being found in Indiana and Illinois indicates a confusion resulting from a mixture of cultures which only continued field work can clarify. Neither the University of Kentucky nor the Ohio State Museum placed any organized parties in the field, although both undertook minor investigations of short duration.

In the northeastern states, the Rochester Museum of Arts and Sciences, under the leadership of Arthur C. Parker, continued its detailed study of the archaeological history of western New York. Field work among sites in the Genesee region furnished valuable evidence on the perplexing Iroquois-Algonkin cultural complex. A field party from the Tioga Point Museum, working near Spanish hill, was fortunate in being able to outline the remains of an ancient palisaded town, at one end of which was a platform of stones which appeared to be an effigy of an animal. The archaeological survey of Connecticut, undertaken by the Peabody Museum of Yale, was continued and some minor excavations were made. Although no organized parties were sent out, the members of the New Jersey Archaeological Society undertook individual investigations, the most interesting of which was the discovery by Charles A. Philhower of an unusual deposit of burials, ashes and pottery, in a Munsee village site south of Port Jervis, New York. The members of the Long Island Chapter of the New York State Archaeological Association have continued their coöperative study of the village sites and cemeteries in their neighborhood.

This year various circumstances have made it impossible to include in the *AMERICAN ANTHROPOLOGIST* the longer form of this summary which has appeared in former years. However the Committee on State Archaeological Surveys of the National Research Council has issued the usual series of individual reports as one of its Circular Series. Copies may be secured by addressing the Committee at 4019 Museums Building, Ann Arbor, Michigan.

CARL E. GUTHE, *Chairman*

## BOOK REVIEWS

### METHODS AND PRINCIPLES

*Der Ursprung der Gottesidee. Eine historisch-kritische und positive Studie. Band III: Die Religionen der Urvölker Asiens und Australiens. Band IV: Die Religionen der Urvölker Afrikas.* WILHELM SCHMIDT. (III: 1155 pp.; IV: 821 pp. Münster in Westfalen: Aschendorffsche Verlagsbuchhandlung, 1931, 1933.)

These two large volumes bring nearer to completion Father Schmidt's elaborate survey of theistic beliefs and practices among the peoples whom he classes as the Urvölker of the world. The same general plan of treatment is followed as was followed in the second volume of the series. The major sources for each people are cited and quoted in extenso, with appreciably less attention as a rule to the minor sources. The facts on theism are gathered, presented in admirable order and with great clarity, interpreted—often largely in the light of Kulturkreis assumptions—synthesized, and submitted to comparative discussion.

Volume III deals with the theism of the following peoples: the Asiatic pygmies, especially the Andaman Islanders, the Semang, and the Philippine Negritos; the peoples of the "arctic Urkultur," especially the Ainu, Central Eskimo, Koryak, Samoyed, and northern Tungus; the southeastern Australians, especially the Kurnai, Kulin, Yuin-Kuri, and Wiradyuri-Kamilaroi. Volume IV covers the African pygmies, the Bushmen, the Bergdama, and the Hottentots, and includes a detailed comparative study of the theism of the Asiatic and African pygmies.

One marvels at the sustained energy and the broad sweep that characterize this whole vast undertaking. The days at Mödling-bei-Wien must be more than twenty-four hours long. Culture historians of all schools are under a heavy debt to the author for the industrious assembling and technical discussion of the widely scattered facts.

Most of us, however, cannot but regret that both in the author's choice of peoples as more or less representative of the earlier primitive culture and in his interpretation of their theistic beliefs and observances, some extremely complex problems are given rather cavalier treatment and summary solution, often by laconic reference to Kulturkreis assumptions, as if these assumptions were established verities. To give just an example or two. In view of the known complexities of the Eskimo problem, surely it is premature, to say the least, to accept confidently the Caribou Eskimo as culturally the most primitive of the Eskimo (III: 333-38, 493-97). Marked traces of the horticultural mother-right culture, one of the three "primary" cultures in Father Schmidt's revision of the Kulturkreis theory, are found widespread in the arctic and sub-arctic Asiatic and American areas (e. g., III: 336, 495, 497, 525).

As regards the African pygmies, granted that in the light of our newer and rapidly growing information theism seems reasonably well established for many or most of the bands, the question still obtrudes itself: Has this theism, like so many

other elements in actual negrito culture, been derived from the neighboring Negro peoples? All in all, the actual pygmy religious culture does look to be independent in the main of that of the Negro, but a more intensive comparison of the *whole* of negrito culture with the *whole* of Negro culture would be desirable. Even a short comparative study (with Kulturkreis left out of the picture), such as Vanoverbergh has recently given us of the northern Luzon pygmies as compared with the neighboring mountain tribes (*Primitive Man* 6: 25-35, 1933), would have helped much.

But regardless of these or of other questions that may, wisely or unwisely, be raised, Father Schmidt's world survey of theism will no doubt remain for many a day the standard reference work in the field. May he be spared to bring it to completion.

JOHN M. COOPER

*Band V: Nachtrage zu den Religionen der Urvölker Amerikas, Asiens u. Australiens.* (xxxviii, 921 pp. 27RM. 1934)

In the fifth volume of his work on *The Origin of the Concept of God* Pater Schmidt devotes considerable attention to California tribes (389 pages), the Salish (172 pages), the Lenape and other Algonkins. Seven hundred and seventy-three pages of the volume are devoted to North American religion, with additional material in an appendix. The method of treatment is essentially that given in abbreviated form in his English volume on *The Higher Gods in North America* and in the preceding volumes of the present work. The main topics of discussion are the belief in the afterlife, the concepts of the culture hero, and the various religious ceremonies.

There is a brief comparative treatment of some of the North American areas. The treatment is in the main, however, ethnographical.

The tribe which Kroeber consistently designates Wintu is consistently referred to by the author as Wintu (Chap. VII, and pp. 306-307). There is an excellent index of topics, native names, and authors referred to in the text. The main thesis seems to be that the culture hero is essentially a god.

WILSON D. WALLIS

*Die heilige Urschrift der Menschheit.* HERMAN WIRTH (Leipzig: Verlag Koehler und Amelang, 1931-33).

This work is intended as a sequel to the author's *Der Aufgang der Menschheit* (1928; reviewed in AA 31.506-507, 1929). He here undertakes a systematic study of prehistoric and primitive symbolism, with the aim of founding a new science, that of "paleo-epigraphy." The key to the spiritual and religious prehistory of humanity is to be found, he holds, in the successful deciphering of the symbols that constituted the "heilige Urschrift der Menschheit" and that archaeology and other dis-

ciplines are revealing to us in such abundance from the four quarters of the globe. Wirth believes that he has succeeded in deciphering these symbols, or at least many of them, and that from them he can reconstruct man's prehistoric spiritual culture, with its homeland in the North.

In the first eleven of the promised twelve instalments of the work that have been sent to the reviewer—the twelfth has been awaited many months—there are 576 pages of text and 427 full-pages plates. The splendid plates should prove of value to those interested in the history of symbolism, writing, and art. As for the text, that is another question. The deciphering of the supposed meaning of symbols appears in most cases highly subjective. The criterion of form is applied loosely. Possibilities of convergence and of independent invention of simple symbols are passed over in silence. Geographical discontinuity in distributions seems to raise no problem in the author's mind. And lastly pro-Nordic convictions are so obtrusive that one can hardly avoid the suspicion that back of the whole work may lie pro-Nordic propaganda.

A new science of "paleo-epigraphy" may be a desideratum. But if it is to be built up, it will have to be built up by more cautious scientific methods than are used by Wirth. His industry may put most of us to shame. He is a prodigious worker. But something more than indefatigable industry is presupposed in the founder of a new science.

JOHN M. COOPER

## AFRICA

*Among Congo Pygmies* P. SCHEBESTA. Translated by G. G. Griffin (265 pp., 89 illus., 3 maps. London, 1933.)

In Egypt, three thousand years before the birth of Christ, King Pepi II commanded his caravan leader to bring home a Pygmy, alive and well, that he might dance before royalty. Explorers of the period 1870-1880, H. M. Stanley, G. Schweinfurth, and W. Junker, gave descriptions of Pygmies, but the accounts were only sufficient to whet the anthropological appetite.

But P. Schebesta is the first traveler to give detailed accounts of the true Pygmies of the Ituri Forest (so-called Pygmy groups are known all over the Congo area, but many are Negro half-breeds). Schebesta first gave his scientific results in the pages of *Anthropos* and *Africa*, and now English readers have an entertaining volume, a translation of the original German (*Bambuti, die Zwerge vom Kongo*, Leipzig, 1932), which is a happy combination of scientific work and popular writing.

Schebesta points out, that though the various groups of Ituri Pygmies are physically similar, they have diverse cultures and languages, which each group borrowed from local Bantu Negroes. Pygmies are described as a submerged class, and no Negro would put himself on the same social plane as these small people whom he regards as little better than chimpanzees. This feeling the Pygmies heartily reciprocate.



Yet, despite antipathies, Negroes and Pygmies have reciprocal interests and obligations. Pygmies are hunters who supply their patrons with meat in exchange for bananas and other vegetable produce which is the staple food of agricultural Negroes.

The small stature of the Bambuti is a true racial characteristic. The Pygmies are keen, active, and intelligent in their own forest environment.

The Pygmies have no agriculture, and no domestic animals except the dog, which is used in hunting. Women spend a great part of their time collecting wild vegetable produce, and to them falls the task of building the simple dome-like huts, which consist of a framework covered with broad leaves. Fire is made by twirling a hard stick on a board of softer wood. But Schebesta speaks of one group of Pygmies who never make fire. They obtain fire from Negroes and carry embers for igniting a new fire.

Arrow poison is prepared by the community, and not by each individual hunter. The arrow is tipped, not with feathers, but with a small leaf.

The social organization is not so simple as travelers have sometimes supposed. The unit is a family consisting of father, mother and unmarried children. There is a grouping of families into clans, and of clans into a tribe governed by a chief who is jealous of his prerogatives and a careful custodian of the hunting territory in which only his tribe can operate. Pygmy girls marry Negro neighbors, but Schebesta does not mention instances of Pygmy men marrying Negro women. He merely states that in some Pygmy groups the men are at a disadvantage because of the departure of their women to marry Negroes.

Game is divided by an elder of the large family group, and distributed to members of the restricted families (father, mother, unmarried children). The man who killed the animal has no special claim to any portion of it. But if a man gathers nuts, these belong to himself or to his restricted family.

Pygmies have charms associated with witchcraft. Worship of the dead, which is so strong a factor in Negro life, hardly enters into religious concepts of the Pygmies. They call the soul Bukahema, and say that at death it departs from the body as breath. Souls of the good go to the god Mungu, who has the form of a man.

It is impossible here to distinguish the beliefs and practices which are characteristic of special groups, but the author has done this scientifically, yet without academic pedantry. And for this reason the book is both entertaining and instructive.

WILFRID D. HAMBLY

*The African Today.* D. WESTERMANN. (xv, 343 pp. \$2.50. London: International Institute of African Languages and Cultures, Oxford University Press, 1934.)

*The African Labourer.* G. ST J. ORDE BROWNE. (viii, 240 pp., map. 17s.6d. London: International Institute of African Languages and Cultures, Oxford University Press, 1933.)

The volumes sponsored by the International Institute of African Languages

and Cultures reflect the duality which characterises the interests of the Institute itself. Certain of these volumes have been entirely scientific presentations of the results of ethnographic research on a number of African tribes, while others have dealt with the practical problems which face European administrators and educators. These two books belong to the second class; each deals with the problems of "applied anthropology"—a branch of the discipline which is but slightly known to American anthropologists.

Professor Westermann's book presents the salient facts of African life and the problems that have resulted from the contact of Africans with Europeans. Beginning with a discussion of the racial types found in Africa, and of the Negro's mind, he proceeds to consider the economic organization of the native cultures of the continent, both in the aspect of food-getting and in that which has to do with arts and crafts. Family life is next given attention, and political organization, while a consideration of the supernatural world concludes the author's attempt to sketch the indigenous foundations of culture. From this point, the book deals principally with current problems (which are, however, not neglected in the sections already mentioned), with the relationship between "educational" needs—meaning by this European education—and the missions, and the problem of the use of the vernacular in schools for natives.

The book is written with great sincerity, and, were it not that a large proportion of its bulk is given over to the discussion of current problems, it would constitute a useful general book on the ethnology of the continent. This is nothing more than might be expected, however, for there are few Africanists whose experience with the continent and its peoples is as long, or as varied, as that of Professor Westermann. There are some aspects of the work which may nevertheless be subject to certain reservations. Thus, it is striking that while most of the illustrations cited of native cultural traits are drawn from West African data, especially from Togoland, the bulk of the material having to do with practical problems and their solution is pointed by references to the situation in South and East Africa. Is it possible that Professor Westermann, who knows the continent so well, assumes the unity of cultural backgrounds and of present-day problems over all of Africa that his presentation suggests? It is also to be questioned whether the lines along which the physical types of Africa are distinguished by the author are not drawn more roughly than the work that has been done on the physical anthropology of the continent would justify. Still another matter is the degree to which Professor Westermann seems to accept the hypothesis of Lévy-Bruhl concerning "primitive mentality" as characterizing the African. This is somewhat surprising, in view of almost universal rejection of this hypothesis on the part of those anthropologists who have had first-hand contact with primitive folk, and in the light of Professor Westermann's long experience with the African in his native habitat. Despite these reservations, however, the book stands as a useful one for the picture it presents of African life today under conditions of contact with Europeans. Above all, it may be regarded as the clearest statement yet available as to the aims and methods of applied anthropology.

The second volume under review has but minor interest for anthropologists. It is an illuminating discussion of the conditions under which native Africans labor, and contains an excellent compendium of the existing statutory protective devices which have been evolved to guard the native African worker from undue exploitation by his employers. There is a chapter in the book which is devoted to aboriginal African society, but this is so general as to be of little value except to give some background for the data with which the author is really concerned.

MELVILLE J. HERSKOVITS

## OCEANIA

*Houses, Boats, and Fishing in the Society Islands.* E. S. CRAIGHILL HANDY.  
(Bulletin, Bernice P. Bishop Museum 90. 111 pp, 25 pls, 21 figs. Honolulu:  
Bishop Museum, 1932.)

The material for this bulletin was collected in the field in 1923, when all inhabited islands in the group except Maiao were visited. Valuable supplementary material was secured in 1925 by Kenneth Emory.

The section dealing with houses is very much fuller than any other account that is available. It is concluded that the elevated wooden floors now seen in dwelling houses are post-missionary. The house which stood on piles, recorded from Hawaii, the Marquesas, and New Zealand, seems to have existed formerly in the Society islands, but to have ceased to be made, in pre-European times. Its function varied in the different groups of Marginal Polynesia, but it was always tapu.

The adornment of pretentious Tahitian houses consisted mainly of *lupa* bound to the rafters or of fine matting having varied designs similar to those seen to-day on the straw hats, woven upon the lower ends of the rafters. Ellis says: "The inside of the rafters of the chiefs' houses or public buildings is frequently ornamented with braided cords of various colors, or finely-fringed white and chequered colored matting. These are bound round the rafters." Emory observed another survival of this decoration in the *fure putu-putu-rua* at Maeva, Huahine, where the lower ends of many of the rafters are painted with bands of colors in the following order: green, white, black, red, black, white, black.

This survival, if Emory is correct in describing it as such, would appear to throw light on the history of Maori rafter patterns, hitherto regarded as without related forms in Polynesia. There is an interesting discussion of the relative age of the different types of houses. In all such discussions comparative data are of much importance. It is an error to say (p. 37) that neither round house nor pahi is known in New Zealand. Both are known in the Chathams as well as in New Zealand.

The section on house furnishings is slight. In view of data easily available a fuller treatment of wooden pillows and seats might fairly be expected. In the section on boats some mention might likewise be expected of the outrigger, and even some indication as to distribution of varieties of outrigger within the group. In the section on fishhooks some discussion of the Society islands section of Beasley's large work on Pacific fishhooks would have been welcome. As it is, only one hook is figured.

compared with Beasley's more than seventy. Beasley's work was published in 1928.

The work is accurate, so far as it goes, and the line illustrations are beautifully drawn. Students will be grateful for it, though they will wish the treatment had been more exhaustive.

H. D. SKINNER

*Die Besiedlung des alten Neuseeland. Eine Anthropogeographische Studie.* KURT WILHELM BACHMANN. (107 pp., 7 figs., map. Studien zur Völkerkunde. Leipzig: Verlag der Werkgemeinschaft, 1931.)

This book is a dissertation, apparently submitted for the doctorate in philosophy in the University of Leipzig, and it displays the usual characteristics of a good academic thesis. It displays, also, the usual characteristics of a work written about a country which the author has not visited. For example, having found in the literature an excellent account of the narrow coastal terrace of northern Taranaki, Dr Bachmann uses it as a description of the whole region from the Awakino river to Otaki, an error which could be made by no one who has seen that area. So, also, he includes the region of the northern sounds, a system of drowned valleys, rough and heavily timbered, and the valley of the Wairau river, a wide, flat, treeless, inland district, within another anthropogeographical region.

Dr Bachmann realizes that the most reliable evidence regarding the history of Maori settlement should be archaeological. As such evidence is wholly lacking in North island he is forced to base his theory on a group of traditions the historical value of which has been impugned, but which Dr Bachmann accepts. He divides New Zealand and the Chatham islands into two great provinces, a northern and a southern. The Chatham islands are included in the latter. The northern province is divided into a number of sub-provinces. The basis of the division between northern and southern provinces is the cultivation of food plants (in particular the kumara) in the northern province and their non-cultivation in the southern. Dr Bachmann makes Banks peninsula the southern boundary of the cultivation of the kumara: it may be remarked that in reality the southern boundary is Temuka, eighty miles farther south.

Dr Bachmann's thesis raises a number of problems, of which only one need be discussed here, namely the validity of the provinces suggested. To the present reviewer, the culture found throughout the New Zealand-Chatham area seems to be fundamentally a unity. This unity appears to be due to its derivation from a single culture-centre, the Society islands. In New Zealand and the Chathams this original Marginal Polynesian culture seems to have been modified solely by the influence of the new environment. The changes thus effected were in no sense fundamental, and they are clearly recognisable only in the field of material culture. The division of New Zealand into cultural provinces does not seem profitable on any other basis than on material culture. A thorough-going survey of Maori and Mori-

ori material culture will lead to the recognition of a number of areas, some few of which will correspond with some of Dr Bachmann's. But most of them will not.

H. D. SKINNER

*Ethnographical Collection from the Kiwai District of British New Guinea in the National Museum of Finland, Helsingfors. A Descriptive Survey of the Material Culture of the Kiwai People.* GUNNAR LANDTMAN. (78 pp., 74 figs., 32 pls. Helsingfors: Commission of the Antell Collection, K. F. Puromichan, 1933.)

The contents of this publication are well indicated by the title. It consists of a brief general account of the various elements of the material culture (mostly taken verbatim from the author's earlier work "The Kiwai Papuans of British New Guinea") each followed by a rather detailed account of the museum's specimens relating to it. Many of these specimens are shown on the plates, each of which is a half-tone reproduction of a photograph and usually includes quite a number of objects. Unfortunately, these so-called plates are rather small. Two, and sometimes even three, may be placed on one page, making it impossible to see much detail.

The text illustrations are largely field photographs of natives and native life and occupations. These are also rather small, and with a few unimportant exceptions, are to be found somewhat better reproduced in "The Kiwai Papuans."

It is to be regretted that the illustrations, particularly the plates, could not have been reproduced on a larger scale, but if choice must be made, to have the larger number is more useful. One could also wish for a more complete survey of the material culture. Nevertheless, the author is to be commended for getting together the general summary and the account of specimens, thus making the understanding of the latter easier and the whole much more convenient for ready reference. Such works relating to New Guinea are altogether too rare.

ALBERT B. LEWIS

## AMERICA

*Bella Bella Tales.* FRANZ BOAS. (xiii, 178 pp. *Memoirs of the American Folk-Lore Society* 25. New York: American Folk-Lore Society, 1932.)

Professor Boas has added still another volume to the long list of his publications upon the Indians of the Northwest Coast. This memoir contains a large number of Bella Bella traditions collected in 1923, together with synopses of numerous published variants from the same or other tribes. The tales are recorded in English with the native text in one case.

As is well known, the Bella Bella occupy an intermediate place in British Columbia, influenced alike by their Kwakiutl kinsmen to the south, their near neighbors the Bella Coola, and by the northern tribes. The increased contact that has followed European settlement has undoubtedly facilitated cultural interactions and diffusion, although the process was unquestionably going on before the white man came.

In their folklore, as in all other aspects of their life, the Bella Bella show this three-fold influence. To the reviewer, who is familiar with the traditions of the Bella Coola, the resemblances to the latter tribe are most apparent. It is not so much the tales themselves—for many are widely distributed—it is the way they are told and the attitude they show to the supernatural world. Repeatedly I felt as if one of my Bella Coola informants was the raconteur. Such close resemblance is to be expected in spite of the linguistic barrier: Bella Coola and Bella Bella were guests at each other's potlatches, the Bella Coola villages on South Bentinck arm were in constant touch with the people of Rivers inlet, and—according to the Bella Coola—there was formerly a village on Burke channel that was virtually bilingual Bella Coola-Bella Bella. Thus the way was clear for mutual influence in spite of occasional hostilities.

Not the least valuable part of this volume is the introduction in which Professor Boas lucidly expounds his views upon the value of folklore, and on the folly of seeking to find hidden meanings where none exist.

T. F. McILWRAITH

*Early Days Among the Cheyenne and Arapahoe Indians.* JOHN H. SEGER. (STANLEY VESTAL, ed.). (155 pp., 3 pls. \$2.00. Norman, Okla.: University of Oklahoma Press, 1934.)

This is a new edition of a well known work. The new matter added is a version of the migration legend of the Cheyenne. The entire text is presented as a narrative of John H. Seger, for fifty years in close contact with the Cheyenne and Arapahoe, personal and official. He founded and for many years conducted an Indian school. His experiences give vivid pictures of early reservation Indian life and are to be welcomed as an historical contribution. As yet few scholars have been sufficiently interested in the life of the reservation to make serious use of such materials; so for the most part this field has been exploited for stories of adventure. The present volume can so qualify, but it impresses the reader as history rather than fiction. Examples are given of Indian behavior in specific situations, not consciously, of course, which may have considerable culture value. Similar examples are to be found in the narrations of officials and missionaries, through which run suggestive parallels. So while the present volume makes no important direct contribution to Cheyenne and Arapahoe aboriginal culture, it does offer materials valuable to the student of frontier history.

CLARK WISSLER

*Standards of Pottery Description.* BENJAMIN MARCH. With an Introductory Essay by Carl E. Guthe. (Occasional Contributions, Museum of Anthropology, University of Michigan, No. 3. Ann Arbor, Mich.: University of Michigan Press, 1934.)

Comparative study of pottery collections located in different repositories hith-

erto has been one of the most difficult although one of the most important branches of archaeological investigation. What ceramic student or general anthropologist has not often found his work blocked by paucity of description or ambiguity of terms which confuse and sometimes render documentary data utterly useless? The inherent difficulty of accurately and adequately describing a specimen becomes painfully apparent to the student when he struggles to re-visualize material on which he has made his own notes some months previously.

The object of the present manual, as pointed out by Guthe in his introduction, is to present a general scheme of description which, as a suggestion in improved methodology, is intended to facilitate rigorous ceramic study. The standards outlined by March are designed to lead toward the closest possible definition of sufficient criteria to provide a sound basis for subsequent identification and comparison. In order that his system may be both accurate and usable, March has weighed the objectivity and the simplicity of each recommended technique and of each term used in description. As a result of his clear realization of the needs of this field, he has provided a valuable and applicable set of standards readily apprehended by the general anthropologist and by the museum man, as well as by the ceramic expert.

Classification of temper, or a-plastic, according to material has been previously used and is recommended here. For determining hardness of paste, March devises a series of mineral crystals arranged to test material by a small abrasion, the result to be recorded by the series number of the mineral.

Significant color, almost impossible to describe with any degree of accuracy, he matches against one of the 7000 graded color samples in Maerz's recently published Dictionary of Color. A roughly descriptive name of the matched shade and its number are recorded.

Surface textures are of two types, glazed and unglazed. Gloss is measured by its degree of reflecting power. The specimen is held at an angle under a flashlight and the resulting reflection of the uncovered bulb filament on the vessel surface is compared with a graded series of six reflections pictured in the handbook. Unglazed wares present added difficulty in that their surfaces lack consistency of finish, consequent upon the human element involved. These surfaces, however, have been found to group themselves closely around four types, which are presented in photographs under the terminology of rough, smooth, imperfectly polished, and highly polished. Four types of surface crackle are defined and pictured.

One of the most novel developments of technique described in this publication is the ceramic pantograph worked out by Guthe and March. By means of this device with its interchangeable points a mechanically accurate initial profile of a vessel is completed in five minutes.

For recording data, March recommends printed information form cards, the blanks insuring uniformity and completeness of record.

In view of the necessity for standard tests and descriptions of criteria leading to classifications, and in realization of the importance of pottery as a record of

geographic and chronological development, local variation, and group inter-influence, I believe the adoption of such criteria as these can not be too strongly urged among anthropologists and ceramic specialists.

FLORENCE M. HAWLEY

*The Changing Culture of an Indian Tribe.* MARGARET MEAD. (xiv, 313 pp. \$4.50. New York: Columbia University Press, 1932.)

In this study of the Antlers (transparent disguise for the Omaha) Margaret Mead has made a signal contribution to our knowledge of the reactions of a typical Indian tribe to the impact of white civilization. The result of her investigation is so interesting and far-reaching that her pioneer attempt is bound to be followed by other such studies, opportunity for which abounds among the North American Indians.

The field work was conducted during a period of five months in 1930, the author being at all times careful that the object of her research remain dark to the Indians.

At the present time the reservation is overrun by whites, which fact does not result in intimacy or mutual understanding between the races.

In the old days the concept of property among the Antlers was strictly limited in its application. Land in particular was never formally owned, nor was it bought or sold. While in one way or another considerable property other than land may have accumulated in the hands of individuals, no merit attached to its hoarding. When subsequently a Congressional bill resulted in a new set of allotments being granted to individuals, the "illusion of vast wealth, of unlimited lands, grew up, which still remains despite the sad curtailment of the acreage owned by Antlers" (p. 52). An orgy of reckless expenditure was initiated, surreptitiously induced by white agents. The easy flow of money proved an irresistible temptation to these innocent Indians.

Similarly in political organization, the prestige surrounding the old chieftain is gone. Chieftainship itself has fallen into decay. The Antler is not only a citizen of the United States but also a ward of the government. As such he has a claim upon the Federal service to the Indian. Privileges the Antler has aplenty; there is much irritating supervision of his life and activities; but his obligations are nil. "From a member of a self-governing, politically selfconscious unit, the Antler has been degraded to a member of a miscellaneous group of people who have hereditary claims to receive special treatment and to give nothing in return" (p. 76).

It is interesting to note how, in the midst of this decay of ancient custom, the kinship system and its adhering practices have remained relatively intact, "largely," remarks the author, "because it is so incomprehensible to the white residents that they usually do not know that it exists." The mother-in-law taboo, for example, is still in force.

In ancient times the part played by grandparents in the education of children was second only to that played by the parents, but now that the past is gone the old people are no longer interested and they do not bother about the children.



In the domain of the sexual code the half-digested transition from the old to the new wrought absolute havoc. The young girl of the past was educated in such a fashion that her demeanor towards male approaches was characterized by bashfulness, fearfulness, and inhibition. Far from taking an active part in the proceedings, she was likely to run off at the first suggestion of danger. All this was changed with the introduction of co-educational Indian schools. Here the girls make the best of their new-fangled freedom. The boys, on the other hand, still cling to the old attitude that a girl who is not bashful is at least potentially a "bad woman." The result can easily be imagined.

In religion the forms of Christianity have replaced those of the older faith, but the spirit of the deeper laid attitudes still hovers above the reservation.

The co-educational schools have substituted the regime of impersonal formality for the warm intimacy of the old Indian home. In the abnormal setting of the Indian community with its contrasting ancient background, co-education has become a curse.

Among the peculiarities of the new situation is that English has been adopted by the younger generation only as a thin and imperfect veneer. Only a few of the old people who received their schooling in the East speak a good English, some of them being "very sophisticated linguistically." Otherwise Antler speech has had greater vitality than English upon the reservation. The author believes that there are not more than a dozen people in the place who do not always think in Antler and prefer to speak it whenever possible.

The whole second part of Dr Mead's book is devoted to the Indian woman. I am told, in fact, that the author preferred to call her study by a title implying this specialization in the woman's part of the culture. As in many other similar situations, the author has found that the changing times have fallen more heavily upon the men than upon the women. Ancient Antler culture was, in more senses than one, a man's culture. The duties of war and chase, of political organization and religion, largely devolved upon the men. It is precisely in these domains of culture that the greatest changes have come, putting the men out of office, as it were. The women, on the other hand, who took care of the more private economic and social concerns, still find something to do in the new order. It is, however, as true of the women as of the men that with the decay of culture has come a fatal loss of the old manual skills. Thus the modern woman is unfit to cope with the difficult economic and domestic conditions.

It is possibly only to record the complete fortuitousness of the process [concludes the author] by which the primitive culture breaks down and the individual member of the primitive society is left floundering in a heterogeneous welter of meaningless, uncoordinated and disintegrating institutions.

In Part Three of her book the author has gathered some of her raw materials in tabular and diagrammatic form which may be utilized to verify or control some of her conclusions.

When pondering one's state of mind as the result of the reading of this study, one is inclined to compare one's self to a spectator of a tragedy and say with Aristotle: my emotions were purified even though the tale was sad.

ALEXANDER GOLDENWEISER

*Navaho Weaving: Its Technic and History.* CHARLES AVERY AMSDEN. (xviii, 261 pp., 12 figs, 123 pls. Santa Ana, California: The Fine Arts Press, 1934.)

Mr Amsden's detailed study of Navaho fabrics is a notable contribution to the subject of historic textiles. He has organized information from scattered sources for the ethnologist, and presented much interesting material which will appeal especially to those readers who think of the Navaho as the outstanding (if not the only) weavers of the Western hemisphere.

In appearance the book is a beautiful piece of work. Colored plates, to mention only one feature, reproduced upon bookbinder's linen suggest the actual texture of the weavings. They include as the author says, "every specimen of Navaho weaving I have ever seen which had a history acceptable to me dating it prior to the year 1880, . . . with a few exceptions where photographs were not obtainable or the tribal origin was doubtful" (p. 205).

The book is divided into two approximately equal parts. Chapters under *Technic* deal with finger weaving (plaiting, looping, and twining), loom development in America, the Navaho loom, and the types and uses of Navaho textiles. I believe that those who have struggled with the problems involved in such descriptions will agree with me that the chapters on weaving devices and fabrics are simply and effectively written. I cite as a particularly good example of clearness the description of the Two-faced Weave including the drafts and the sketches of a partly completed reconstruction (pp. 57-62).

The second part of the book, the historical, emphasizes those factors which contributed to Navaho weaving as it developed from its earliest known phases to its modern aspects. Expeditions, exploratory and punitive, governmental experiments emanating from old Spanish and American centres, and the voluntary as well as compulsory movements of the tribe form the background of events. Interpolated sections break into the chronological presentation of the life of the people to summarize and focus attention upon the growth of the weaving craft and its comparatively rapid evolution into tribal industry.

Students of American textiles will be grateful for the full treatment accorded to the debated subject of bayeta and its successors. This word has been used too loosely to avoid resultant confusion. Mr Amsden sums up bayeta's contribution to weaving in the following: "The bayeta period marked the high point, the 'Golden Age' of Navaho weaving. . . . Only an expert could wed native wool and bayeta fibre in a harmonious and happy union" (p. 150).

The last fifty pages of the book record the blanket-to-rug transition period, the arrival of commercial yarns and dyes, and the "boom" times in Navaho weaving

when the white man's increased demands resulted in a general breaking down of old standards. This portion of the book will appeal especially to owners and collectors of Navaho weavings.

LILA M. O'NEALE

*Latin American Music: Past and Present.* ELEANOR HAGUE. 198 pp., illus. \$3.50. Santa Ana, California: The Fine Arts Press, 1934 )

This book is obviously written not for the technical anthropologist, nor for the technical musician, but for the interested layman, and it should be viewed in this light. What the author sets out to do for the reader is accomplished very well indeed: to present in a popular style the musical traditions in Latin America conceived as a continuity. To trace the various threads, single and interwoven, of Indian, Spanish-Portuguese, and African music, which now seem on the road toward combining into a distinct phase of Western musical practice, is a task which transcends the limits of a popular book, not to mention the limits of our present knowledge. Thus, most points raised by Miss Hague are not so much in the class of problem and solution, as in that of suggestion. The technically interested reader may regret that no more "meat" from the not too voluminous technical literature has been incorporated in the treatise. But he will find a good deal, nevertheless, that will assist him in his specific interest. One might mention the references selected from the old literature by Miss Hague, including pictures of musicians and dancers from codices, some of them seldom or never reproduced before, and a few suggestive prints of similar content from old sources. Pictures of modern Indian or folk dances illustrate the merging of Indian and European traits. Of especial value are the lists of dances practised today by the Spanish or the Europeanized Indians, and the bibliography which mentions many relevant works published in Latin American countries. The student must be grateful to Miss Hague, chiefly for having assembled so many valuable leads to material and sources for future study.

Since an invitation should be made attractive, the excellent format and make-up are especially appropriate to this volume, which invites the public to initial interest and the student to further research.

GEORGE HERZOG

*Indianer-Rassen und vergangene Kulturen. Betrachtungen zur Volksentwicklung auf einer Forschungsreise durch Süd- und Mittelamerika.* RICHARD N. WEGNER. (viii, 320 pp., 21 figs., 128 pls. Stuttgart: Ferdinand Enke, 1934 )

The matter and purpose of the present work are accounted for by the author, who is a professor of anatomy in the University of Frankfurt-on-Main, in the foreword:

The route of travel with its daily experiences, during the years of 1927-1929, have been described in the book "To the Sun Gate through ancient Indian land" (Darmstadt, 1931),

while the present volume concerns itself with the motivations underlying the purpose of the expedition (p. v).

The fourteen chapters treat successively of the following subjects: (1) Indians of the virgin woods of east Bolivia (pp. 1-34). A large group of them called "Siriono" (siri, chonta palm) by the early settlers and comprising such tribes as the Ñeozé, Tirinié, Quruñguá, Jande, are discussed according to their history, habitat, ecology, physical anthropology, linguistics, customs of peace and war. (2) Ghost dances amongst brier and cactus of the Chaco (pp. 35-52), treating of the life habits of the Choroti in the arid southern virgin forest periphery and showing their dependence upon the Mohsek-complex of ghosts whose omnipresence under most varying forms and conditions is one of the mainstays of their tribal life. (3) Heirs to the Cordilleras foothills (pp. 53-63), contains a detailed physiographic description of the northeast Bolivian outliers of the Andes, a region difficult of access and thus isolating the native tribes of Yungas and Chimanos. (4) Indians as sport adherents (pp. 64-88). Sports are influenced by certain magic concepts and serve in the supernatural arousal of the participants (p. 69). (5) Cattle raisers in the lonely highland puna (pp. 89-119), the barren steppe formation of west Bolivia, about 4000 m. above sea level. The Aymará and Quechúa, whose physical traits are described on pp. 90-91, are careful breeders of llamas, cattle, sheep and donkeys. (6) Agriculture in the by-ways and terraces of the Sierra (pp. 120-40), where Aymará and Quechúa have developed and practised irrigation since ancient times; raising on this basis maize, barley, and alfalfa, the last two European importations, and of the bulb plants potatoes, ulluma (*Ullucus tuberosus*), oca (*Oxalis tuberosa*) and añu (*Leporeol. m. tuberosum*). (7) The culture of the "Villainous" (pp. 141-59), i.e., the culture of the Diaguita in the Argentinian northwestern provinces of Salta, Jujuy and Tucumán. They are called Calchaquí (Kallchaycuy, the villainous) on account of certain cruel customs of war and of child sacrifice as related by the early Spanish chroniclers. This region in particular is rich in rock drawings, the meaning of which does not yet seem to be fully revealed. (8) Lake Titicaca and the Island of the Sun (pp. 160-78): in this chapter ancient culture and modern life are reviewed. (9) Charm of ancient Indian culture on the barren coast of Peru (pp. 179-98) accounts for pre-Inca cultures and the present environmental setting. In spite of the colossal size of architectural ruins, "in contrast to the great cultures of Asia, North Africa and the Old World in general, the primitiveness of the inner arrangement of the living quarters is quite striking" (p. 187). (10) The Vilcanota Valley, an Inca paradise (pp. 199-221), now the Urubamba Valley, describes this scenic stronghold (Cuzco, etc.) and the heroic history of the last Incas. (11) Noble metals and their exploiters (pp. 222-47) gives an account of the history of gold, silver, and copper from the period previous to the conquista to present times and the development of a colonial metal art. (12) Passion and love of the mestiza and creole (pp. 248-66): the choala or Aymará-Mestiza of Bolivia are described in this chapter. (13) Cities above the clouds (pp. 267-81): La Paz and Sucre in Bolivia, Cuzco in Peru, offer upon the historic background rich fields of observation in topography, archaeology, architecture, the plastic arts,

customs, and living conditions. In the final chapter (14) on the temple pyramids of most highly developed Indian culture, the monuments of the ancient Maya art in its southernmost distribution, the pyramids, stelae, and their inscriptions are appropriately discussed and interpreted.

The book under review, not just a scientific volume in the strict sense, abounds in data referring in each chapter to the history, culture and anthropology of the areas covered. It teems with information on special features such as native customs, fauna and flora, and, what seems to be of most valuable import, brings out the behavior of the indigenous cultures under the cruel thrust of the conquista. The book affords entertaining reading and is lavishly illustrated with unusually fine photographic reproductions. Its usefulness, on account of the rich and varied material treated, would have been greatly improved by an alphabetical index.

BRUNO OETTEKING

### PHYSICAL ANTHROPOLOGY

*Early Forerunners of Man. A Morphological Study of the Evolutionary Origin of the Primates.* W. E. LE GROS CLARK. (xiv, 304 pp., 89 illus. \$5.00. Baltimore: William Wood and Co., 1934.)

Professor Clark's illuminating researches upon the morphology of the Insectivora and the Tupaiioidea have culminated in the present volume, the aim of which is the solution of "the question of the precise position which Man occupies in the evolutionary development of the Primates." Professor Clark has expertly and concisely marshalled a convincing array of phylogenetic evidence calculated to review Man in the light of his Primate forerunners. More than mere array, however, the evidence is carefully considered from all possible viewpoints. The cultural anthropologist, who so blithely uses the terms "parallelism" and "convergence," will profit by reading Chapter I, "Introduction," word for word; the professional student of Man will find in this Chapter the essence of scientific exposition and procedure; the layman will find the *whys* and *hows* of human evolution.

The discussion of the distribution of Primates in space and time is necessarily short, nevertheless the salient types receive due notice. The author follows Elliot Smith and Davidson Black in considering *Sinanthropus* closer to *Pithecanthropus* than *Neanderthal*, the latter view being held, among others, by Dubois and Hrdlička. *Tarsius* is placed in a central sub-order, *Tarsiioidea*, "somewhere between the lemurs and the monkeys."

It is impossible, in this review, to present the detailed conclusions of the author. In a series of chapters devoted to a consideration of the skull, the teeth, the limbs, the brain, the special senses, the digestive system, and the reproductive system, Professor Clark systematically reviews the evidence for and against the degree of affinity of the several Primate forms. Of great interest is the fact that the author classes the Tree-shrews, *Tupaiioidea*, with the Primates, rather than with the Insectivora. This in itself is not new, for Wood-Jones includes the *Tupaiioidea* in the

group Strepsirhini together with the Lemuroidea. Professor Clark, however, goes still further when he says "it is not improbable that the Lemuroidea had already dichotomized into their two main groups. Lemuriformes and Lorisiformes, *before* [italics mine] they had reached the early phase of evolution represented by the Tree-shrews"

The ultimate origin of the Primates is traced back to the late Mesozoic—end of the Jurassic or beginning of the Cretaceous—when there arose a basic stock of generalized mammals, probably related to the extinct Pantotheria. By the beginning of the Tertiary the orders of eutherian mammals were distinct, their type probably similar to *Zalambdalestes* and *Deltatheridium*, described by Gregory and Simpson. The course of Primate evolution from then on is admirably schematized by the author in his Figures 87–89. Although the Anthropoidea are derived from Prototarsioids, Professor Clark concludes: "It is certain that no closer relationship between the Anthropoidea and the Tarsioida can be claimed than is implied in such a common origin from the very base of the tarsioid stem."

The volume in general is remarkably free from controversial elements. Statements are not dogmatic and conclusions do not mask as assertion. Were any criticism to be voiced it would be technical: the line-drawings, in their lack of detail, will not serve to identify the several Primate forms to any but the specialist. In Figure 8C the element E (ethmoid) has not been fully identified. But these are minor faults. "Early Forerunners of Man" is highly recommended: in every sense of the word it is a text on Primatology.

WILTON MARION KROGMAN

*The Ancestry of the Long-Lived.* RAYMOND PEARL AND RUTH DEWITT PEARL. (168 pp., charts. \$3.00. Baltimore: The Johns Hopkins Press, 1934.)

Notable contributions on the duration of life and causes of death have been coming from the School of Hygiene and Public Health of Johns Hopkins University for a number of years. Some of the reported findings, more or less elaborated, and with many important additions, are brought together in "The Ancestry of the Long-Lived." The book contains more than the title suggests, for it deals also, and by way of contrast, with the ancestry of groups of ordinary persons, as well as with some of the general characteristics of the long-lived and their sibs.

Long-lived subjects for the purpose of this study were first located largely through newspaper clippings. They were then approached with a rather extensive questionnaire. If the answers were adequate, and could be verified by independent investigation of vital records, etc., the propositus was considered eligible for inclusion. In this manner there were secured 365 living subjects, of ninety years and over, whose own ages, and the exact ages at death of all of the six immediate ancestors of each, were definitely known. This group, the "Longevous Series," is chiefly contrasted with another group selected not, as in the first case, on the basis of the age of the propositus but because, without regard to age, each propositus (a) was listed in the Family History Records of the School of Hygiene and (b) had

at the time no living ancestors. In this, the "FHR Series," the number of families was 143. The two groups are obviously not strictly comparable, which introduces considerable difficulty for both the authors and the reader. Nevertheless, through skillful and convincing analysis, the authors manage to extract a number of important conclusions.

The long-lived themselves are discussed with reference to places of birth and racial origins. But in view of the manner in which the *propositi* were first discovered, it would seem that for the present full confidence in the seeming implications of this phase of the work is not wholly justified. One may wonder if New York's apparent preeminence as a birthplace of the longevous and Florida's apparent inferiority in this respect may not reflect merely a difference in attitude of the news-gatherer. Centenarians are "news" somewhat in proportion to their rarity. Of the foreign born among these long-lived subjects, the Irish are most numerous (1.9 per cent) followed closely by Germans and English (1.7 per cent each). This does not necessarily indicate that the Irish are a long-lived stock, for it is stated that as late as 1850, when these subjects were mostly in their teens, 4.92 per cent of the white population of this country was born in Ireland, 2.99 per cent in Germany and 1.43 per cent in England. In light of these proportions the English would seem to have made the best showing. The most probable conclusion is that, on the whole, the northern races probably show a higher incidence of long-lived persons than do the other groups considered in this book.

The treatment of the habits of the long-lived is also, of necessity, somewhat unsatisfactory. It is limited almost entirely to their use of alcoholic beverages, although it is to be hoped that other aspects of their behavior will be considered later. Among the 365 long-lived subjects, 56.6 per cent are reported to have been total abstainers throughout their whole lives, as compared with 45.3 per cent in a sample of the population of Baltimore. The difference is statistically significant. At the other extreme, only 3.7 per cent of these subjects were ever in their long lives considered as heavy drinkers. This figure is to be contrasted with 27.4 per cent in a sample of the general population. The difference is obviously statistically significant. Of moderate and very moderate drinkers there are 41.4 per cent among the long-lived and 37.3 per cent among the controls. Only three of the 365 were classed as very heavy drinkers: one from North Carolina, one from Tennessee and one from Canada. It may be of passing interest that of ten Scotch and Irish, one is recorded as a moderate drinker, two as very moderate, and seven as abstainers. The authors very wisely refrain, however, from using this data as prohibition propaganda. They do insist with justice that

these data furnish cogent evidence that the moderate use of alcoholic beverages does not prevent the attainment of great longevity to the user . . . [and] are incompatible with the widely preached doctrine that any indulgence in alcohol, however slight, inevitably and universally shortens life.

This point may be considered as established.

The sibs of the long-lived are allotted one chapter, in which it is shown that they

experience a much lower mortality up to age 40 than do people in general. Indeed it appears that the expectation of living to 40 is as great in some family lines as is the expectation of living to 25 in other family lines. Even the infant mortality in these sibships (of ninety to one hundred years ago) turns out to have been less than half that recorded for the general population in 1901 at a time when infant mortality rates in general had been greatly reduced. This in conjunction with the other evidence presented makes it seem "clear beyond question or doubt that, insofar as mortality is an index, the proposition of the Long Series belong to stouter stocks, biologically considered, than do those of the FHR Series."

As an aid in the analysis of ancestral contributions to the individual's longevity, there is introduced an important new "character" called TIAL—pronounced *tee-ail*, and derived from the initials in "Total Immediate Ancestral Longevity," i.e., the sum of the ages at death of the six immediate ancestors, father, mother, and four grandparents. "TIAL is a definite attribute of biological significance pertaining to the individual, . . . just as truly as his own age is one of his characters." Its degree of relative variability is moderate in the scale of human traits, comparing roughly with such characters as body weight, skin pigmentation in whites, height of mandible, etc. It can vary only between limits set by six times the age of puberty and six times the upper end of the life span. For all practical purposes these limits may be regarded as about 90 and about 600. The highest actual TIAL recorded in the book is 599, the lowest 254. Chapters VI-IX are devoted to Variations in TIAL; Paternal and Maternal, Male and Female, and Generational Contributions to TIAL; Individual Contributions to TIAL; Living Age and TIAL.

The results of this analysis of TIAL, while of much interest, cannot be adequately summarized in a short review. Briefly they show a very definite statistical relation between an individual's TIAL and the age which he himself is likely to attain. It may be deduced "that, . . . on the average, each additional 3.7 years in mean TIAL of the Long Series over the FHR Series has associated with it one additional year in mean duration of life of the offspring." Approached from the opposite angle, there is found to be a steady rectilinear increase in average TIAL with increase in living age from 10 to 50 years. The slope of the line up to the 50 year period is moderate, but when prolonged beyond this point it shows a much steeper ascent for ages 50-70, after which it becomes horizontal. These findings indicate that there are stocks with low TIAL values and low life expectancy and others with a high TIAL and a high life expectancy, but the data are not adequate as yet to explain the sharp rise in the curve of TIAL values for living persons between 50 and 70 years old. Two possibilities are suggested: (1) that the transition in character between the two ends of the curve is caused by some kind of overlap between the long-lived and short-lived stocks, and (2) that there is in fact a third, average or intermediate, type representing most of the population and composed of persons who, like their parents, normally die at an age somewhere between 50 and 70. The authors rather favor the latter alternative.

In the sections just alluded to, convincing evidence is presented that a high TIAL is statistically associated with long life, or, in other words, that longevity is



to an appreciable degree a matter of heredity. Attempts to push the analysis beyond this point were on the whole less satisfactory, inasmuch as no clear type of heredity was revealed. The authors point out that the statistical method of correlation may not after all be well adapted for study of modes of inheritance. On the other hand they deplore a common tendency to assume the existence of Mendelian heredity in such cases when none has been demonstrated. They suggest, however, that further study of the material may very likely reveal some particulate type of transmission.

Aside from the introduction of TIAL as an important subject for investigation and a critical analysis of what it shows in this material, the book has considerable value as a reference work since it is replete with tables, some of them extending over several pages and presenting actuarial and other data on many groups besides those primarily considered. If in the end the book, which is avowedly a "progress report," leaves the reader not quite satisfied on a number of points, this may be regarded not as a defect but as a virtue.

C. H. DANFORTH

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## DISCUSSION AND CORRESPONDENCE

### MASKS IN THE SOUTHWEST

Were kachina masks used in the Pueblos prior to 1540, or were they introduced by the Spaniards? Dr Elsie Clews Parsons has argued in support of the theory of Spanish introduction.<sup>1</sup> Dr R. L. Beals, in a communication to the *AMERICAN ANTHROPOLOGIST*,<sup>2</sup> has cited evidence in support of pre-Spanish use of masks: (1) a statement by Luxán that Espejo's party witnessed masked ceremonies among the Tigua in 1582-1583; and, (2) an explanation by Bandelier of why masked ceremonies were not mentioned by early Spanish explorers. Dr Beals also cites several instances of mask-wearing in Mexico at the time of the Spanish conquest, which lends support to the assumption that kachina masks were of Indian origin.

In consideration of this problem, the following notes may be of interest.

Bandelier believed the kachinas to be aboriginal:

The "cachinas" in the pueblos of the Rio Grande are for the most part strictly private, . . . I am convinced that, although neither Coronado nor Castañeda and Jamarillo mention the dances, they were still zealously performed in the winter of 1540-41 in the seven pueblos of Zuñi.<sup>3</sup>

The Spaniards, especially the clergy, attempted to suppress the Indian kachina dances:

The dance was early prohibited, but was never completely suppressed. . . . One of the first things the Pueblos did after the expulsion of Otermín from New Mexico was to re-establish the Cachinas.<sup>4</sup>

Masks are not specifically alluded to in these passages. But in the following citations it will become quite clear, I think, that masks are definitely associated with the kachinas.

During the revolt of 1680 the Indians destroyed almost everything that was Spanish, but they were especially eager to destroy religious articles. Escalante tells us:<sup>5</sup>

. . . and soon as all the Spaniards were gone . . . Popé [the Indian leader of the uprising] gave orders (under pain of their lives to such as should not obey) that all the men, women and children should take off the crosses and rosaries they might have, and should break them in

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<sup>1</sup> Spanish Elements in the Kachina Cult of the Pueblos, *ICA* 23; Masks in the Southwest of the United States, *Mexican Folkways* (Mexico City) 5, No. 3, 1929. In a later publication (*Some Aztec and Pueblo Parallels*, *AA* 35: 611-31, 1933) Parsons has somewhat modified her theory.

<sup>2</sup> Vol. 34: 166-69.

<sup>3</sup> *The Gilded Man* (New York) 1893, p. 195.

<sup>4</sup> Bandelier, *Final Report of Investigations Among the Indians of the Southwestern United States, etc.* (Cambridge) 1890, Part 1: 151.

<sup>5</sup> From Escalante's letter, translated in *Land of Sunshine* (Los Angeles) 12: 309, 1900.

pieces or burn them; that no one should speak the name of Jesus or Mary, nor invoke the saints, that all the married men should abandon the women with whom they had contracted matrimony according to the Christian law, and should take other [women] as suited them; and that no one should speak the Castilian tongue, nor show any holding of affection for the God of the Christians, for the saints, nor for the priests and Spaniards; and that wherever they had not already done so they should burn all the temples and sacred images. . . . In fine, there remained in all the kingdom no vestige of the Christian religion; all was profaned and destroyed.

Had the masks been borrowed from the Spaniards it is quite likely that they too would have succumbed to such thoroughgoing destruction of foreign things.

But the Indians did not destroy masks (neither did they destroy *all* of the articles of Catholic worship, as the following quotations show).

In December, 1681, Otermin arrived in Isleta pueblo on his way to reconquer the Pueblos. He searched the houses and found a few church relics.<sup>6</sup>

The Indians were then ordered to take out of their houses and from any other place whatsoever, the idols, feathers, powders, masks, and every other thing pertaining to their idolatry and superstition. This was done, and when all such things had been collected they were piled in a heap and burned.

It seems quite clear from this that both Indians and Spaniards alike recognized the masks as belonging to Indian culture rather than to the Spanish.

Otermin's maestro de campo, Mendoza, marched on to the north. At Puaray<sup>7</sup>

. . . they made a house to house search and found . . . a great many "masks de cacherias, in imitation of the devil, which are those that they use in their diabolical dances." All of the latter were collected and burned.<sup>8</sup>

Arriving at Sandia pueblo (December, 1681) Mendoza found that three cells of the monastery had escaped destruction, and these<sup>9</sup>

judging from their appearances, had been left by the Indians for the principal purpose of conducting their dances in them. All of these cells were employed as storerooms for masks, powdered herbs, feathers, and other things used by the Indians in their ceremonials and dances, particularly that of the Cacina. . . . In the whole pueblo not a cross was found, on the other hand new estufas had been built. The masks, powders . . . were burned.

At San Felipe Mendoza made a house to house search.<sup>10</sup>

In most of the houses a great many masks such as were employed by the Indians in their ceremonies were found.

<sup>6</sup> C. W. Hackett, *Otermin's Attempt to Reconquer New Mexico, 1681-1682*, Old Santa Fé (Santa Fé, New Mexico) 3, No. 9: 56, 1916.

<sup>7</sup> *Ibid.*, p. 63.

<sup>8</sup> I see no reason for assuming that this passage refers to the Devil of Christian theology; the Spaniards declared that anything non-Christian was of the Devil.

<sup>9</sup> Hackett, *op. cit.*, p. 65.

<sup>10</sup> *Ibid.*, p. 67.

At Santo Domingo, Mendoza made a similar search.<sup>11</sup>

Many masks and other idolatrous objects were found. New estufas had been built.

"Not a cross to be found," "new estufas built," "masks hidden by the Indians, burned by the Spaniards," all seem to reveal a sharp distinction drawn by Indians and Spaniards alike between things Indian and things Spanish. And the association of masks with kachinas is quite evident. To assume that masks alone, among the many objects of Spanish ritual, were adopted and cherished by the Indians seems unwarranted. It is significant to note, too, that today it is in the region of early Spanish influence that whites and Mexicans are strictly excluded from the kachina dances. Among the Hopi, who were quite free from Spanish domination, as compared with the eastern pueblos, aliens are admitted freely to the masked ceremonies. At Zuñi, whites are admitted but Mexicans are excluded. Thus, a fairly close correlation between the presence of Spaniards and secrecy about masks is established. The fact that the kachina cult is more extensively developed among the Zuñi and the Hopi than among the pueblos of the Rio Grande region may also be related to this relative absence of Spanish influence.

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### MAIDEN SACRIFICE AMONG THE OJIBWA<sup>1</sup>

In the article *Sacrifice* in the Handbook of American Indians,<sup>2</sup> Swanton states "It appears from Cuq that the Nipissing formerly offered a young female as a sacrifice to 'the god of war,' but the wording leaves us somewhat in doubt whether the sacrifice was anything more than symbolic." Undoubtedly the source for his observation is Cuq's *Lexique de la langue Algonquienne*, article AGOJ (p. 17), *Agonakvens, la petite femme du sacrifice*, with the footnote "C'était avant l'introduction du christianisme, une jeune fille que l'on plaçait sur une estrade élevée, pour l'offrir au Dieu de la guerre, et obtenir sa protection dans une expédition militaire." A similar Ojibwa custom seems to have escaped his notice. In Baraga's Dictionary of the Otchipwe Language, Part I, English-Otchipwe, under Virgin (p. 278) we read "Virgin presented to the Great Spirit, *agonakwe*;" in Part II, Otchipwe-English, under *Agonakwe*, "A virgin whom pagan Indians place on an elevated scaffold and present to the Great Spirit, in order to obtain a prosperous success in war." The type of compound is certainly unusual, but the underlying concepts are clearly "hanging" and "woman." There can be no doubt that the above is to be connected with Huron customs: observe Bressani's Relation of 1653, "They also paint the prisoners destined to the flames, as victims consecrated to the God of war," and "Aireskoi, we sacrifice to thee this victim, that thou mayst satisfy thyself with her

<sup>11</sup> *Ibid.*, p. 67.

<sup>1</sup> Printed by courtesy of the Smithsonian Institution.

<sup>2</sup> BAE-B 30, Part 2 404, 1910.

flesh, and give us victory over our enemies." see the Jesuit Relations (ed. Thwaites), Vol. 38: 253 and Vol. 39: 219 respectively. see also Vol. 52: 157 (a captive woman mounts a scaffold to be burned); Vol. 54: 25 implies women as well as men were burned on a scaffold. It is therefore not likely that the sacrifice of a virgin to the Morning Star among the Pawnee is to be connected with the above, but it is possible that further data may change our view. It may be added that Lafitau, *Mœurs des Sauvages Américains* (1724), Vol. 2: 189 tells us that dogs were offered in a kettle as a sacrifice to Areskouï, the God of War, Vol. 1. 206 that the latter is the God of War, Vol. 1: 132 we are again given the Iroquois equivalent of Areskouï, namely, Agriskoué (with the information they are gods of Sun).

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#### NOTE ON KICKAPOO ETHNOLOGY<sup>1</sup>

When I translated Jones's Kickapoo Tales (AES-P9) my knowledge of Kickapoo ethnology was very slight, and thus it happens that I failed to correct a very obvious error in the text. At 90.12 we read "Ma'kwiozowānōwi" which is translated "Bear tail." Since the passage concerns food no doubt Ame'kwiozowānōwi (in Jones's transcription) "Beaver tail" should be substituted in place of the word in question. In this connection it may be well to point out the close similarity of the words for "black bear" and "beaver" given by Dr W. D. Strong in the Davis Inlet dialect of the Labrador coast—mésk-weh and mis-kweh respectively—is only partially due to a similar error. I have recorded in the same dialect mēsk<sup>u</sup>, "bear" and amisk<sup>u</sup>, "beaver;" cf. Montagnais Māshkū and Amishkū cited by Lemoine, *Dict. Français-Montagnais*, under Ours and Castor; Cree maskwā, amisk; Fox mā'kwā, ame'kwā.

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#### SOME ORTHOGRAPHIC RECOMMENDATIONS

Arising out of discussions by a group of six  
Americanist linguists

##### *Item I. On Unit Symbols for Unit Phonemes*

A suitable orthography for representing the sounds of a given language should provide a unit symbol for each phoneme, i.e., for each psychologically unitary sound, even though such a phoneme can be analyzed into two or more sounds from the strictly phonetic standpoint. Digraphs are always unsatisfactory and often misleading. Thus, *qwa-* as a method of writing the Nootka word for "thus" seems to contradict the inviolable rule that no consonantic cluster may stand at the beginning of a word in Nootka. It is patent that the difficulty is mainly orthographic, for

<sup>1</sup> Printed by courtesy of the Smithsonian Institution.

the sound is itself unitary in principle—a rounded or labialized velar stop, *q*, slightly aspirated and with voiced *w*-effect only for a fleeting instant before the inception of the following vowel. The rounded *q* is entirely different from a sequence of *q* and *w*, as, for instance, in the word *bišaqwe'in*, “bad, it is said,” in which an unrounded *q* is followed by a full aspiration (characteristic of preconsonantic stops in Nootka) before the inception of the *w*-sound; the syllabic division is *bi-šaq-we'in*. An adequate orthography for Nootka and numerous other languages should provide a means of representing rounded gutturals and velars in such a way that they cannot be confused with the unrounded gutturals and velars followed by *w*.

It must, however, be emphasized that a unitary symbol should be employed only when the phonetic complex is psychologically (phonemically) unitary in the given language. Thus, in English the combination of *k* and *w* (represented by *kw*, *kʷ*, or *ckw*) is not a unit, as is clear from the following facts:

1. That there is only one kind of *k* and *w* sequence (there are no pairs of words contrasting as do Nootka *yaq-wi'-'as-'itq*, “he who is first on the ground” and *ya-qwi'-'as-'itq*, “he who goes outside”).

2. The sequence-type of *k*+*w* is not isolated in English but is paralleled by other combinations of stop + semi-consonant (e.g., *b*+*y* in *beauty*, *t*+*w* in *twice*, *t*+*r* in *tree*, *s*+*m* in *small*, etc.).

3. The *k* and *w* under appropriate conditions, in accordance with English syllabic theory, may be separated syllabically (e.g., in *backward*, *requisite*).

4. The *k* is only mildly affected by rounding, and this is not peculiar in English, for all sounds tend to assimilate somewhat to the preceding and following sound.

The problem of providing a unitary symbol rather than a digraph for unitary sounds arises over and over again, particularly in such cases as the following:

1. Sounds characterized by a timbre feature, including labialization, palatalization, and others.

2. Nasalized consonants (as in Southern Paiute and Tubatulabal).

3. Affricates.

Devices for the unitary symbolization of such sounds must be as easy as possible to print and must be, so far as this is possible, in accord with general usage. The following devices are recommended:

For labialized consonants: *p<sup>w</sup>*, *b<sup>w</sup>*, *t<sup>w</sup>*, *d<sup>w</sup>*, *k<sup>w</sup>*, *g<sup>w</sup>*, etc.

For palatalized consonants: *p<sup>y</sup>*, *b<sup>y</sup>*, *t<sup>y</sup>*, *d<sup>y</sup>*, *k<sup>y</sup>*, *g<sup>y</sup>*, etc.

For nasalized consonants: *<sup>n</sup>p* [= *m<sup>n</sup>p*], *<sup>n</sup>b* [= *m<sup>n</sup>t*], *<sup>n</sup>t*, *<sup>n</sup>d*, *<sup>n</sup>k* [= *ηk*], *<sup>n</sup>g* [= *ηg*], etc.; or, if preferred, with superior nasal consonant corresponding in position to the following consonant: *<sup>m</sup>p*, *<sup>m</sup>b*, *<sup>n</sup>t*, *<sup>n</sup>d*, *<sup>n</sup>k*, *<sup>n</sup>g*, etc.

For sibilant and lateral affricates: *c* [= *ts*], *č* [= *tʃ*], *z* [= *dz*], *ž* [= *dʒ*], *ʎ* [= *ɬ*], *λ* [= *dɬ*].

The simple treatment of labialized and palatalized consonants requires no comment. The device of employing post-posed superscript diacritical marks is perhaps applicable to other situations for which no recommendation is here offered.

Of the two ways suggested for writing nasalized consonants, the first consists in using a pre-posed superscript <sup>n</sup> as a generalized diacritic representing homorganic nasal attack. The second consists in adapting the superscript to the position of articulation, therefore writing <sup>m</sup> before labials, <sup>n</sup> before dentals, <sup>ɳ</sup> before gutturals, etc. The first method is perhaps more satisfactory for the linguist in providing a generalized means of indicating the nasal characteristic. The second method is easier, on the whole, for general usage.

For the sibilant affricates, the symbols *c* for [ts], *č* for [tʃ], are widely used among linguists and form part of the current orthography of several important Slavic languages. (For usages current in various linguistic fields, see M. Heepe, ed., *Lautzeichen und ihre Anwendung in verschiedenen Sprachgebieten*, Berlin, 1928.) *z* for [dz] and *ž* for [dʒ] are used by Slavicists (*op. cit.*, 68 ff.) and similar forms are used in other circles (*op. cit.*, 76 [Finno-Ugrian], 90, 93 [Turk]). *λ* for [dʲ] has been used in Eskimo by Jenness (*Notes on the Phonology of the Eskimo Dialect of Cape Prince of Wales, Alaska*, IJAL 4:168-80). *χ* for [tʃ] is an innovation formed from *λ* as *ʃ* from *l*. The use of *c*, *č* for [ts], [tʃ] requires that *š* be used for the palato-sibilant fricative in place of the *c* commonly used among Americanists.

*Item II. On the Writing of the Palatal Sibilant Fricative*

The use in Americanist circles of *c* for the palatal sibilant fricative is isolated. The most general usage of linguists over the world is to employ the symbol *š*. This usage has appeared even in Americanist works, being employed by Preuss in his *Grammatik der Cora Sprache*, IJAL 7:1 ff., by Schuller in *La Lengua Ts'ots'il*, IJAL 3: 193-218, by Rivet in various works, and by others. In view of its wide use generally, extending even into the Americanist field, *š* is to be regarded as preferable to *c* for the sound under discussion.

*Item III. On the Writing of the Glottal Stop*

Since the glottal stop in many languages is functionally as important as any other consonant, it is desirable to write it, in such cases, in a more substantial form than as an apostrophe. The apostrophe suggests that the sound be ignored by many readers (who may be unfamiliar with it), leading in some cases to inexact analyses and to impossible etymologies. It is therefore recommended that the glottal stop be written in the form } or > when it constitutes a true consonant of a given language. This suggestion is not intended to apply to the use of the apostrophe as a diacritical mark above or after consonants to indicate that they are glottalized. If the writing of the consonantic glottal stop is modified as suggested, we have an effective means of differentiating the glottal stop from the diacritic for glottalization.

A post-vocalic aspiration, often written <sup>h</sup>, should be written *h* when it constitutes a true consonant of a given language.

GEORGE HERZOG  
STANLEY S. NEWMAN  
EDWARD SAPIR

MARY HAAS SWADESH  
MORRIS SWADESH  
CHARLES F. VOEGELIN

DE HEVESY ON MUNDA AND FINNO-UGRIAN LINGUISTICS,  
AND ON THE EASTER ISLAND SCRIPT<sup>1</sup>

In view of Dobo's enthusiastic endorsement of De Hevesy's attempt to prove the genetic connection of the Munda languages with Finno-Ugrian, and his attempted demonstration that the script of the Easter island tablets is related to that of the Mohenjo-Daro seals (*AMERICAN ANTHROPOLOGIST*, 35: 552-54), I translate freely the critique of Wilhelm Printz in *Zeitschrift der Deutschen Morgenlandischen Gesellschaft*, n.f., 12: 98, 99: "The author under the nom de plume F. A. Uxbond published in 1928 an article [entitled] 'Munda-Magyar-Maori. An Indian link between the antipodes.' In the present book [*Finnisch-Ugrisches aus Indien*], he lays aside Maori, and is only concerned with proving that the Munda family of speech is most closely connected with the Finno-Ugrian one, and that India is the archaic home of the Magyars, etc. All this [is based] solely upon as diligent as well as uncritical study of the pertinent dictionaries. He has not concerned himself how and when the march of the Magyars out of India to the West occurred historically. That with this 'method' any one can prove anything, is long known. The author in general has not thought that the superior Hindu culture would [necessarily] influence that of the Munda linguistically and technologically; otherwise he would have taken pains [to acquire] some knowledge of Sanskrit. Its complete lack is shown in the discussion of words such as *bhasa* (*bhāṣā*), *bhasam* (*bhasman*), *guru*, *isor* (*īśvara*), *jat* (*jāti*), *kalapani*, *uttar(a)*, etc."<sup>2</sup>

TRUMAN MICHELSON

BUREAU OF AMERICAN ETHNOLOGY

THE NEW ATLATL, FOUND IN ITALY, A FALSIFICATION

The second volume of the recently published Transactions of the XXV International Congress of Americanists (La Plata, 1932) begins with a brief article by Dr G. V. Callegari on a "New Precious Ancient Mexican Atlatl, recently discovered in Rome." A glance at the halftone illustrations, which by the way are in inverted position, made me recognize that most, if not all, of the fairly large figurative representations were identical with another specimen, preserved in the Museo Nazionale de Antropologia e Etnologia in Florence, which I had studied and copied in 1911.

In fact, comparing in detail my enlarged drawings with the published photographs, I found that all the carvings on the back or underside of the two weapons correspond exactly, figure by figure. Only very slight differences in the execution of details are noticeable, as for instance, in the second figure or section where the two lateral darts are in horizontal position in the Florentine specimen, while they are drooping in the debated carving. Similarly, in the symbol which forms the bottom of

<sup>1</sup> Printed by courtesy of the Smithsonian Institution.

<sup>2</sup> English words in brackets have no equivalents in the German text but are implied.

the drawing two Chalchihuitl pendants or plugs are inclined about  $45^{\circ}$  in the original, and much more in the new specimen. This section is also somewhat higher in the latter than in the former.

If we had only a photograph of this side of the new atlatl at our disposal we might draw the conclusion that it is not an intentional fraud, but a reproduction of the Florentine object made for some scientific exhibit; a copy not too faithfully executed by a wood carver as a perfectly legitimate reproduction of a fine piece of ancient Mexican art.

However, when we direct our attention to the obverse or upper side, it becomes clear that here a change is made which overthrows the idea that a facsimile had been produced. The top figure is arbitrarily added and copied from the atlatl in the Museo Kircheriano of Rome. The Florentine specimen has here a long plain plug.

To the left and right of the long groove that lengthwise divides this side of the instrument, there remain two narrow bands which are decorated with eight or nine different figures on each strip. These human figures and emblems also are copied in the falsification, but with some omissions and misunderstandings. Thus in the second of these lateral figures to the left a profile head seems to be carved in the spurious atlatl, while in the genuine specimen the front face of the god Tlaloc is represented. These little figurines are somewhat difficult to understand in the original even for the professional archaeologist, and the faker got lost in the pell-mell of intricate symbolism.

Finally the complete finger accommodation of the false specimen is modeled after the London atlatl with its shell loops and thread bindings; it is, indeed, as exact a copy of this device as can be made.

The final result of our brief investigation, then, is to pronounce the new atlatl of the Museo Prehistorico of Rome not only as a doubtful piece but directly an intentional falsification. To mitigate the sad news, it may be said that in their three other beautiful specimens, one in Rome and two in Florence, Italy in any case possesses the finest museum pieces of all ancient Mexican spear-throwers known today.

The reader can easily make a comparison of the new atlatl with the specimen of Florence by consulting the fairly large photograph of the latter published by Mr D. I. Bushwell, Jr. in the *AMERICAN ANTHROPOLOGIST* 7: plate 22, 1905.

HERMANN BEYER

TULANE UNIVERSITY



## NOTES AND NEWS

### ANTHROPOLOGICAL RESEARCHES IN THE ITALIAN SAHARA

The conquest of the Italian Sahara is very recent (the Fezzàn was securely occupied only during 1930 and Cufra during 1931), but methodical scientific explorations immediately followed military action. Great merit attaches to the Royal Geographic Society of Rome for sending several scientific missions into the Sahara as soon as possible. Within a little more than two years seven such missions were sent there for anthropological, geographic, linguistic, zoological, and botanical purposes. They have already gathered data of not merely regional but international interest, as is demonstrated by the present Saharian Exhibition in Paris.

One of the most important discoveries was made by Prof Biagio Pace of the Royal University of Naples. Near Germa—the ancient Garama, capital of the Garamants—he explored, with Prof Sergi, a necropolis composed of nearly fifty thousand tombs distributed over a stretch of more than one hundred miles. The results of these excavations gave indications of a Saharian civilization evolved in contact with Romans during the first centuries of the Christian era.

With respect to physical anthropology, a mission was guided by Prof Lidio Cipriani of the National Museum of Anthropology, Royal University of Florence. He went twice to Fezzàn for nearly eight months during 1932 and 1933. He also had occasion to study to some extent the prehistoric populations of Libya. In particular he found many new, peculiar rock engravings reproducing scenes of hunting elephants and other wild animals now vanished from the country. On the rocks of Uadi Zigza he noted drawings referable to Herodotus' famous description of Garamant carriages drawn by four horses. These investigations of rock engravings were followed by others carried on by Prof Graziosi.

The anthropological researches were aimed almost exclusively at the nomadic Tuàreg and Tébu. It is clear that they are the remains of very ancient populations occupying North Africa long before the Mohammedans conquered the country. North African populations, originally of quite European appearance, are now, for the most part, so intercrossed with other races that it would seem impossible to secure an orientation among their manifold forms of heads, physiognomies, color of skin and eyes, proportions of the body, etc. However, the situation is not so complicated as appears at first glance. We must remember that Phoenicians, Greeks, Carthagenians, Vandals, Romans, and Jews—that is to say, the last peoples who went to North Africa in historic or protohistoric times—could never have exerted there a great physical influence. More importance attaches to the Arabs in the Mohammedan epoch and to Negroes by way of slow infiltration through the Sahara. We can easily recognize today the results of all these different intercrossings. Beyond these peoples, there are in existence other men who remained exempt from the racial intercrossing mentioned here. Among them are to be considered the Tuàreg and Tébu.

The anthropological investigation of Tuàreg and Tébu was not at all easy. For this reason Prof Cipriani got complete physical measurements of only 64 adult male Tuàreg, moulded 18 facial casts of the living (13 men and 5 women), and obtained nearly 2000 anthropological photographs. It must not be forgotten that the most numerous earlier series of Tuàreg measurements was made on fifty individuals by Prof Leblanc of Algiers University.

With the Tébu the difficulty was still greater, and the research remained unfinished. On Tébu Prof Cipriani got anthropological measurements on twelve adult males, many photographs, and three facial casts of the living.

All these researches were integrated by collecting skeletons and ethnographic objects of the Tuàreg and Tébu.

LIDIO CIPRIANI

#### GRANTS AND FELLOWSHIPS OF THE AMERICAN COUNCIL OF LEARNED SOCIETIES

The American Council of Learned Societies offers in 1935 grants in aid of research and post-doctoral fellowships for training and research in the humanities. The grants are in two categories: small grants, not exceeding \$300, and larger grants, not exceeding \$1,000. Applicants for grants must possess the doctorate or its equivalent, and must be actually in need of the desired assistance and unable to secure it from other sources. The grants are made for specific purposes (other than living expenses or in lieu of salary), such as travel, photostats, secretarial assistance, etc., in connection with projects of research actually under way.

The fellowships have a basic stipend of \$1,800, to which allowances for travel, expenses of research, and other purposes may be added. Applicants must have the doctorate, must not be more than 35 years of age, and must have demonstrated unmistakable aptitude for constructive research.

Information respecting grants and fellowships, as well as application blanks, may be secured from the American Council of Learned Societies, 907 Fifteenth Street, Washington, D.C. *All applications must be filed by December 15, 1934*, and awards will be announced in March, 1935.

#### FIRST TREE RING CONFERENCE

A conference on tree ring studies was held on June 11 and 12, 1934, at the Museum of Northern Arizona at Flagstaff, under the chairmanship of Dr A. E. Douglass of the University of Arizona. The following institutions interested in dendrochronology were represented: Carnegie Institution of Washington, University of Arizona, Gila Pueblo, Laboratory of Anthropology, and the Museum of Northern Arizona. The representative from the University of New Mexico was unable to attend. Among the problems of the science discussed was the need of a journal in which to publish the original data on which climatological conclusions and prehistoric dates are based.

It was, therefore, decided to publish a quarterly called the "Tree Ring Bulletin." It will start in a modest way with the subscription price at one dollar and a half a year. Dr A. E. Douglass will be Editor-in-Chief; Dr Waldo S. Glock, Assistant Editor; Dr Harold S. Colton, Managing Editor; and Mr John C. McGregor, Assistant Managing Editor. Plans call for a July number to appear in a few weeks. While the publication will be of immediate interest to archaeologists, it will also deal with problems of climatology and other subjects to which tree ring studies are related.

Those interested in supporting the "Tree Ring Bulletin" and wishing to start with Volume 1, Number 1, are requested to send their subscriptions to Dr Harold S. Colton, Managing Editor, Museum of Northern Arizona, Flagstaff, Arizona.

HAROLD S. COLTON

### THE FIRST INTERNATIONAL CONGRESS OF ANTHROPOLOGICAL AND ETHNOLOGICAL SCIENCES

London, July 30 to August 4, 1934

This congress was particularly remarkable for its large attendance and for the energy and efficiency with which its organizers brought it together. Attendance was over 1200, representing 40 countries and innumerable institutions; 201 abstracts of papers were printed *before* the meetings.

Meetings were held in the classrooms of London University, and special sessions were arranged in museums and private collections.

Unfortunately, "Americanists" from the Americas were thinly represented, and it is to be hoped that they will make up for this by attending the second congress, to be held in Copenhagen, Denmark, in 1938.

Undoubtedly the reason Americanists were not present in great numbers is that they have lost interest in such meetings after the apparent collapse of the old and time-honored Congrès Internationale des Américanistes. Due to the inferior management of the Buenos Aires congress in 1932, and the apparent total abandonment of the Sevilla meeting supposed to be held this year (1934), it is understandable that Americanists should hesitate to spend time and money on long travel.

The wide scope and enthusiastic attendance of the London congress promises well for the Copenhagen meeting, and the writer recommends that American anthropologists keep this congress in mind.

The following is a list of Americanist papers presented at the congress:

Long, Richard C. E. (Portarlinton, Ireland): Maya and Mexican Writing.

König, H. (Köln am Rhein): Präanimistische Vorstellungen im Weltbild der Eskimos.

Williams, Rev J. J. (Boston): Ashanti Cultural Influence in Jamaica.

Williams, Rev J. J. (Boston): Psychic Phenomena in Jamaica.

Karsten, Prof R. (Helsingfors): Confession in the Ancient Inca Empire.

Karsten, Prof R. (Helsingfors): *Methods of Ethnological Field-research, With Special Reference to South America.*

Gahs, Prof D. A. (Zagreb): *Die Menschenopfer des zirkumpazifischen Gebietes und ihre mythologische grundlage.*

Preuss, Dr K. T. (Berlin): *Ursprung und Bedeutung der Menschenopfer in Mexico (nach einer fast unbekannten Bilderhandschrift).* [This is *Historia Tolteca Chichimeca*, in the National Library, Paris.]

Thalbitzer, Prof W. (Copenhagen): *The Soul of the Eskimo Language (with phonograph records).*

O'Neale, Prof Lila (Berkeley, California): *The Paracas Mantle—Its Technical Features.*

Pettazzoni, Prof R. (Rome): *Confessions of Sins Among Primitive Peoples.*

Dieseldorff, E. P. (Guatemala): *Maya Intercalary Systems.*

Pôspísil, Prof F. (Brno): *Anthropological Types in the Southwest of the United States.*

Pôspísil, Prof F. (Brno): *The Hoop Dance Among European Peoples and North American Indians.*

FRANS BLOM

WE DEEPLY REGRET TO ANNOUNCE the sudden death of Dr Berthold Laufer, Curator of Anthropology, Field Museum of Natural History, in Chicago on September 13th.

ERRATUM: Owing to a compositor's error, the last line of page 159 of this volume has been transposed to the corresponding position on page 161. Pages 159-60 should read: "A traveler cannot fail to notice the tombs of hunters, which consist of cairns of stones enclosing a hollow chamber." Pages 161-62 should read: "Men always take evening meals in the men's council house (onjanga) in the center of the village."



# INDEX TO VOLUME 36

- Acculturation: among Huichol, 447; method of studying, 62.
- Africa: Bechuanaland Bakxatla, 561; the Galla, 313; the Hehe-Bena-Sangu, 203; the Ovimbundu, 157.
- American Anthropological Association, Proceedings, 272.
- American Ethnological Society, Report, 286.
- AMSDEN, CHARLES AVERY, review of, 611.
- ANDREWS, E. WYLLYS, article by, 345.
- Anthropological Society of Washington, Report, 285.
- Anthropologische Gesellschaft, meeting, 143.
- Arapaho: kinship terms, social usages, 137.
- Archaeology: Eskimo, 309; Inca, 239; Mitla, Oxaca, 89; new Peruvian site, 317; Peru, 405; Poncho House ruins, 490; report on field work in North America during 1933, 595; southwestern Utah, 70; Utah Lake, 431.
- Athapaskan: Kutchin tribes, 168.
- BACHMANN, KURT WILHELM, review of, 605.
- Bakxatla, herding rites, 561.
- BARRETT, S. A., review of, 461.
- BASU, NIRMAL-KUMAR, review of, 293.
- BEALS, RALPH L., article by, 89; review by, 296.
- BEALS, RALPH L., AND ELSIE CLEWS PARSONS, article by, 491.
- BEYER, HERMANN, article by, 632.
- BLACK, DAVIDSON, death of, 319.
- Black-on-white, black-on-gray ware, 73, 74.
- BLISH, HELEN H., article by, 180.
- BLOM, FRANS, note by, 636.
- Blood-letting, Yucatan, 59.
- BOAS, FRANZ, review of, 606.
- BONNERJEA, BIREN, review by, 293.
- BOVILL, E. W., review of, 131.
- Bow, sacred, of Oglala Dakota, 180.
- Bow-drill: Birket-Smith on, 95; from cliff house, 96; in North America, 94.
- BOWLES, GORDON TOWNSEND, review of, 128.
- BROWNE, G. ST. J. ORDE, review of, 602.
- Burials: ceremony, Huichol, 453; Maya cave, 223.
- BURROWS, EDWIN G., review of, 292.
- BUTLER, MARY, article by, 223; review by, 294.
- CAMP, CHARLES L., review by, 473.
- Carib, of Barama River, 331.
- Caribbean, seminar on, 142.
- CASO, ALFONSO, article by, 487.
- Ceremonies: Huichol fiestas, 447; marriage ceremonies of Yunnan, 535; Navaho fire dance, 434; Oglala sacred bow, 180.
- China: marriage customs of Yunnan, 524; Moslem colony in, 141.
- CLARK, W. E. LE GROS, review of, 614.
- CLEMENTS, FORREST, reviews by, 478.
- Clowns: Mayo-Yaqui, 500; Pueblo, 492.
- COLE, FAY-COOPER, obituary by, 271; review by, 130; review of, 302.
- COLLINS, JR., HENRY B., article by, 309; reviews by, 118.
- COLTON, HAROLD L., note by, 635.
- COOK, P. A. W., review of, 466.
- COOPER, JOHN M., reviews by, 599.
- COOPER, L. R., review of, 461.
- Couvade, 333.
- Crime: among Carib, 331; among Tlingit, 145.
- Cross-cousin marriage: Arapaho, 137; Haida, 365; Maya, 188; Minangkabau, Western Indonesia, 39; and social organization, 323.
- Culture-areas: homogeneous traits of, California, Plateau, 521; North Pacific Coast, Plains, Southwest, Eastern Woodland, Southeast, 522; Wissler's concept criticized, 517.
- Culture changes, in Yucatan, 57.
- Cuzco, Inca masonry, 239.
- DANFORTH, C. H., review by, 615.
- DELORIA, ELLA, lecture by, 143.
- DENSMORE, FRANCES, articles by, 386, 487.
- DORDILLON, R. I., review of, 292.
- DUGGAN-CRONIN, A. M., review of, 131.

- EARTHY, E. DORA, review of, 470.  
EGGAN, FRED, article by, 188.  
EICKSTEDT, EGON FREIHERR VON, review of, 302.  
ELLWOOD, CHARLES A., review of, 118.  
Eskimo: archaeology and somatology, 309; bow-drill, 94; rickets among, 441.  
Erratum, 637.
- FENTON, WILLIAM N., review by, 464.  
Field fellowships, 143.  
"Finger-print ware," southwestern Utah, 74.  
First fruit ceremonies, Yucatan, 58.  
FURST, CARL M., review of, 474.
- GADEN, HENRI, review of, 466.  
Galla, identification of, 314.  
GAULT, ROBERT H., review of, 478.  
GAYTON, A. H., reviews by, 479.  
Germany, historical instruction in, 139.  
GIFFORD, E. W., reviews by, 131, 133, 291.  
GILLIN, JOHN, article by, 331.  
GOLDENWEISER, ALEXANDER, reviews by, 609; review of, 114.  
Grants, of Social Science Research Council, 489.  
GUSINDE, MARTIN, field work of, 143.  
GUTHE, CARL E., report by, 595.
- HAGUE, ELEANOR, review of, 612.  
Haida, kinship and social behavior, 355.  
HALLOWELL, A. I., article by, 389; review of, 464.  
HAMBLY, WILFRID DYSON, article by, 157; reviews by, 289, 290, 470, 601.  
Handbook, of South American Indians, 317.  
HANDY, E. S. CRAIGHILL, review of, 604.  
HANSEN, GEORGE H., article by, 431.  
HARGRAVE, LYNDON L., on Poncho Ruin, Utah, 490.  
HAWLEY, FLORENCE M., review by, 607.  
Hehe-Bena-Sangu, 203.  
HERSKOVITS, MELVILLE J., obituary by, 266; reviews by, 466, 602.  
HERZOG, GEORGE, reviews by, 476, 612.  
HERZOG, GEORGE AND OTHERS, article by, 629.  
HIRSCHBERG, WALTER, address by, 143.  
HOLMES, S. J., review of, 300.
- HOOTON, EARNEST A., review by, 474.  
HORÁK, JIRÍ, review of, 132.  
HOUGH, WALTER, review by, 297.  
House structure, pueblos of southwestern Utah, 72.  
Huichol, 446.
- IHLE, ALEXANDER, review of, 466.  
IMMENROTH, WILHELM, review of, 289.  
Inca, masonry, 239.  
Integration of culture: in North American culture areas, 518; in Yucatan, 60.  
International Congress of Anthropological and Ethnological Sciences, 143, 636.  
Institutional series, new, 317.
- JESSUP, MORRIS K., article by, 239.  
JOCHELSON, WALDEMAR, review of, 461.
- KANE, SAMUEL E., review of, 130.  
KELLY, ISABEL T., article by, 548.  
Kinship systems: Arapaho, 137; Haida, 355; Hehe-Bena-Sangu, 208; Indonesian, 39; Minangkabau, 36; Oceanian, 50.  
KLINEBERG, OTTO, article by, 446.  
KROEBER, A. L., article by, 1; review by, 465.  
KROGMAN, WILTON MARION, review by, 614.  
Kutchin, tribal distribution and synonymy, 168.
- Laboratory of Anthropology, 143.  
LANDTMAN, GUNNAR, review of, 606.  
LAUFER, BERTHOLD, death of, 637.  
LEBZELTER, VICTOR, address by, 143.  
LEENHARDT, MAURICE, review of, 471.  
LEHMANN, WALTER, review of, 297.  
LEWIS, ALBERT B., review by, 606.  
LINDERMAN, FRANK B., review of, 124.  
LOEB, EDWIN M., address by, 143; article by, 26.  
LOEFFLER, LUTHER, review of, 474.  
LOTHROP, SAMUEL K., review of, 294.  
LOWIE, ROBERT H., article by, 321; reviews by, 114, 124, 129, 469.
- MCILWRAITH, T. F., review by, 606.

- Maiden sacrifice, among Ojibwa, 628.  
 Mammoth, North American Indian knowledge of, 81.  
 MARCH, BENJAMIN, review of, 607.  
 MARRETT, R. R., reply to, 315; review by, 116.  
 MARTIN, PAUL S., article by, 94.  
 Mascoutens, identification of, 226.  
 MASON, J. ALDEN, article by, 314.  
 MATHIASSEN, THERKEL, reviews of, 118.  
 MATIEGKA, JINDRICH, review of, 132.  
 Maya: cave burials, 223; culture changes, 57; inscriptions, 345; kinship terms and cross-cousin marriage, 188.  
 Mayo-Yaqui: clowns, 500; comparison with Pueblo clowns, 506.  
 MEAD, MARGARET, review of, 609.  
 Mental diseases, among primitive groups, 234.  
 MERWIN, RAYMOND E., review of, 297.  
 MICHEISON, TRUMAN, articles by, 137, 226, 486, 628, 629, 632; review by, 300.  
 MILLER, G. S., review by, 471.  
 Minangkabau, 26.  
 Mitla, Oaxaca, culture sequence at, 89.  
 Moiety, and sib, 325; among Haida, 334.  
 MUMFORD, W. BRYANT, article by, 203.  
 MURDOCK, GEORGE PETER, article by, 355, review of, 475.  
 MURRAY, FREDERICK G., article by, 438.  
 Music: expression in singing, 488; in Gulf States, 386; Huichol, 458; Jivaro, 388; Peru, 388; Ovimbundu musicians, 167.  
 NASH, PHILEO, review of, 461.  
 NEUMANN, FELIX, death of, 318.  
 Northern Salteaux, religion, 389.  
 OBERG, KALervo, article by, 145.  
 OETTEKING, BRUNO, reviews by, 302, 612.  
 Oglala Dakota, sacred bow ceremony, 180.  
 OLSON, R. L., review by, 461.  
 O'NEALE, LILA M., article by, 405, review by, 611.  
 OSGOOD, CORNELIUS, article by, 168.  
 Ovimbundu, 157.  
 Paiute, Southern, 550.  
 Papago, Easter Devils, 515.  
 PARK, WILLARD Z., article by, 98.  
 PARSONS, ELSIE CLEWS, AND RALPH L. BEALS, article by, 491.  
 Pavlotso, shamanism, 98.  
 Peabody Museum, Harvard, activities of, 318.  
 PEARL, RAYMOND, AND RUTH DEWITT PEARL, review of, 615.  
 Peru: Inca masonry, 239; new site, 317; Paracas textile technique, 405.  
 Peyote, among Huichol, 449.  
 Population, native American, 1.  
 Pottery types: Mitla, Oaxaca, 91; southwestern Utah, 74.  
 POWDERMAKER, HORTENSE, review by, 471; review of, 129.  
 Prehistory: Tardenoisian in central Europe, 242; Utah Lake skull cap comparisons, 432.  
 Publications, some new, 134, 304, 481, 619.  
 Pueblo: clowns, 491; comparison with Mayo-Yaqui clowns, 506; masks, 626; sites, southwestern Utah, 70.  
 RADIN, PAUL, communication by, 315; review of, 116.  
 KASMUSSEN, KNUD, death of, 319, obituary of, 585.  
 REAGAN, ALBERT B., article by, 434.  
 REDFIELD, ROBERT, article by, 57; review by, 475.  
 RICARD, ROBERT, review of, 296.  
 ROBERTS, HELEN H., review by, 291; review of, 476.  
 ROBINSON, ARTHUR E., communications, 139, 313, 314; review by, 131.  
 ROMER, ALFRED SHERWOOD, review of, 473.  
 Roth, Walter E., obituary of, 266.  
 ROUCEK, JOSEPH S., review by, 132.  
 ROYS, LAWRENCE, review by, 297.  
 SCHAPER, I., article by, 561.  
 SCHEBESTA, PAUL, field work of, 143, reviews of, 469, 601.  
 SCHMIDT, WILHELM, reviews of, 599, 600.  
 SCOTT, HUGH LENOX, death of, 490.  
 SEGER, JOHN H., review of, 607.  
 SETZLER, FRANK M., review by, 461.



- Shamanism: Huichol, 451; Ovimbundu, 166; Paviotso, 98; in Bechuanaland, 569; and crime, among Carib, 339; among Tlingit, 154.
- Shamanistic power, acquisition of, among Paviotso, 99, among Ovimbundu, 166, use of, among Paviotso, 104.
- SHAPIRO, H. L., reviews by, 128, 474.
- SHRYOCK, JOHN K., article by, 524.
- SKINNER, H. D., reviews by, 604, 605.
- Social Science Research Council, grants of, 489.
- Social usages: Arapaho, 137; Haida, 355; Hehe-Bena-Sangu, 206; Huichol, 456; Maya, 188; Minangkabau, 33; Tlingit, 154.
- Somatology: Eskimo, 309; pigmentation and rickets, 438; Utah Lake skull cap, 431.
- South American Indians, handbook of, 317.
- Southern Paiute, 550.
- Spanish culture elements, in Yucatan, 57.
- SPANNAUS, GUNTHER, review of, 466.
- SPENCER, J. E., article by, 70.
- SPIER, LESLIE, review by, 302; review of, 465.
- STARR, FREDERICK, obituary of, 271.
- STEWART, JULIAN H., review by, 126.
- STIMSON, J. FRANK, review by, 292.
- STRONG, W. D., article by, 81; review of, 126.
- Sumatra, patrilineal and matrilineal organization in, 26
- Tardenoisian, in central Europe, 242.
- THALBITZER, WILLIAM, obituary by, 585.
- THOMPSON, STITH, review of, 479.
- Tlingit, crime and punishment, 145.
- TODD, T. WINGATE, review by, 300.
- Traditions, of mammoth, 82.
- UNDERHILL, RUTH, article by, 515.
- University of Adelaide, activities of, 317.
- VAILLANT, GEORGE C., review of, 297.
- WALLIS, WILSON D., reviews by, 118, 600.
- WASSEN, HENRY, field work of, 490.
- WEBSTER, HUTTON, review of, 133.
- WEGNER, RICHARD N., review of, 612.
- WEIGNER, KAREL, review of, 132.
- WESSEL, BESSIE BLOOM, review of, 478.
- WESTERMANN, D., review of, 602.
- WHITE, LESLIE A., article by, 626.
- WINSTON, ELLEN, article by, 234.
- WISSLER, CLARK, review by, 607.
- Witchcraft: among Carib, 338, 340; Paviotso, 110; Tlingit, 154.
- WOODS, CARTER A., article by, 57.
- WREN, CHRISTOPHER, publication available, 490.
- Wyoming Historical and Geological Society, 490.
- Yucatan, culture changes in, 57.
- ZOTZ, LOTHAR F., article by, 242.
- ZUCKERMAN, S., review of, 471.





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